SECTION 01 57 20

ENVIRONMENTAL PROTECTION

**09/21**

PART 1 GENERAL

1.1 REFERENCES

1.2 DEFINITIONS

 1.2.1 Environmental Pollution and Damage

 1.2.2 Environmental Protection

 1.2.3 Contractor Generated Hazardous Waste

1.3 GENERAL REQUIREMENTS

1.4 SUBCONTRACTORS

1.5 PAYMENT

1.6 SUBMITTALS

1.7 ENVIRONMENTAL PROTECTION PLAN

 1.7.1 Compliance

 1.7.2 Contents

1.8 PROTECTION FEATURES

1.9 SPECIAL ENVIRONMENTAL REQUIREMENTS

1.10 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

1.11 NOTIFICATION

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

3.2 LAND RESOURCES

 3.2.1 Work Area Limits

 3.2.2 Landscape

 3.2.3 Erosion and Sediment Controls

 3.2.4 Contractor Facilities and Work Areas

3.3 WATER RESOURCES

 3.3.1 Cofferdams, Diversions, and Dewatering Operations

3.4 AIR RESOURCES

 3.4.1 Particulates

 3.4.2 Odors

3.6 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

 3.6.1 Refrigerants

 3.6.2 Solid Wastes

 3.6.3 Chemicals and Chemical Wastes

 3.6.4 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

 3.6.5 Fuel and Lubricants

 3.6.6 Waste Water

3.7 RECYCLING AND WASTE MINIMIZATION

3.8 NON-HAZARDOUS SOLID WASTE DIVERSION

3.9 CULTURAL RESOURCES

3.10 NATURAL RESOURCES

3.11 TRAINING OF CONTRACTOR PERSONNEL

3.12 POST CONSTRUCTION CLEANUP

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

|  |  |
| --- | --- |
| WETLANDS DELINEATION MANUAL | (1987) Corps of Engineers Wetlands Delineation Manual  |
| 33 CFR 328 | Definitions of Waters of the United States |
| 40 CFR 150 - 189 | Pesticide Programs |
| 40 CFR 260 | Hazardous Waste Management System: General |
| 40 CFR 261 | Identification and Listing of Hazardous Waste |
| 40 CFR 262 | Standards Applicable to Generators of Hazardous Waste |
| 40 CFR 279 | Standards for the Management of Used Oil  |
| 40 CFR 302 | Designation, Reportable Quantities, and Notification |
| 40 CFR 355 | Emergency Planning and Notification |
| 40 CFR 68 | Chemical Accident Prevention Provisions |
| 40 CFR 171 - 178 | Hazardous Materials Regulations |
| 16 USC 470 *et seq*., Public Law 89-665 Stat.915 | National Historic Preservation Act of 1966, as amended |

1.2 DEFINITIONS.

1.2.1 Environmental Pollution and Damage:

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection:

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste:

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methylethylketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.3 GENERAL REQUIREMENTS:

Minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work must be protected during the entire duration of this contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and regulations will be the Contractor's responsibility.

1.4 SUBCONTRACTORS:

Prime contractor is responsible for ensuring compliance with this section by all subcontractors.

1.5 PAYMENT:

No separate payment will be made for work covered under this section. Payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor, and payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations are the Contractor's responsibility. All costs associated with this section must be included in the contract price.

1.6 SUBMITTALS:

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submit the following:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern must be defined within the Environmental Protection Plan as outlined in this section. Address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but are considered necessary, must be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan must be current and maintained onsite by the Contractor.

1.7.1 Compliance:

No requirement in this Section will relieve the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor will be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

Include in the Environmental Protection Plan the following and additional information as appropriate.

a. Names of individuals with the contractors organization who are responsible for ensuring adherence to the Environmental Protection Plan.

b. Names and qualifications of individuals responsible for manifesting hazardous waste to be removed from the site if applicable.

c. Description of Contractor’s environmental protection personnel training program and the names and qualifications of individuals responsible for providing or ensuring training.

d. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan must include monitoring and reporting requirements to assure that the control measures are in compliance with the final approved erosion and sediment control plan, as well as Federal, State, and local laws and regulations.

e. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.

f. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto the paved public roads by vehicles or runoff.

i. Drawing showing the location of borrow areas.

j. Include in the Spill Control plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, Chemical Accident Prevention Provisions, 40 CFR 302 Reportable Quantities, 40 CFR 355 Emergency Planning and Notification, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. Include in this plan, as a minimum:

(1) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual will immediately notify the Contracting Officer and the Base Environmental Office in addition to the legally required Federal, State, and local reporting channels if a reportable quantity is released to the environment. Include in the plan a list of the required reporting channels and telephone numbers.

(2) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

(3) Training requirements for Contractor's personnel, methods of accomplishment, and documentation of accomplishment of the training.

(4) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

(5) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

(6) The methods and procedures to be used for expeditious contaminant cleanup.

k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris and schedules for disposal.

(1) Identify any subcontractors responsible for the transportation and disposal of solid waste. Submit licenses or permits for solid waste disposal sites that are not a commercial operating facility.

(2) Evidence of the disposal facility's acceptance of the solid waste must be attached to this plan during the construction. Attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. Submit the report for the previous quarter on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted (e.g. the first working day of January, April, July, and October).

(3) Indicate in the report the total amount of waste generated and total amount of waste diverted in tons.

(4) A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. Detail in the plan the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

l. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

m. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be onsite at any given time must be included in the contaminant prevention plan. Update the plan as new hazardous materials are brought onsite or removed from the site.

n. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan must include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan must include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, include a copy of the permit and associated documents as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan must include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

o. A cultural resources plan that includes Standard Operating Procedures 1-9 as outlined in the Hill AFB Integrated Cultural Resources Management Plan relevant to the project for identifying and protecting cultural resources known to be on the project site: and/or procedures to be followed if cultural resources not previously known to be onsite or in the area are discovered during construction. Include in the plan methods to assure the protection of known or discovered resources, identifying lines of communication between Contractor personnel and the Contracting Officer.

p. A Natural Resource and Wetland Plan that defines procedures for identifying and protecting natural resources, including wetlands, known to be on the project site: and/or identifies procedures to be followed if natural resources including wetlands, not previously known to be onsite or in the area are discovered during construction. Identify lines of communication between Contractor personnel and the Contracting Officer, as well as the Natural Resources Manager.

1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer will make a joint condition survey. Immediately following the survey, the Contractor will prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs, and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report will be reviewed by the Natural Resources Manager prior to being signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor must protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the work under the contract.

1.9 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the special environmental requirements listed in AFI 32-7020 and OO-ALC HAFB Supplement 1. Contractor is required to show all tipping fee receipts to verify that solid waste were disposed of in the appropriate landfill.

All excess soils and construction debris shall be transported to a permitted landfill off base.

1.10 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations from the drawings, plans and specifications, requested by the Contractor and which may have an environmental impact, will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.11 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. After receipt of such notice, the Contractor will inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or equitable adjustments allowed for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.12 HAZARDOUS, TOXIC AND RADIOACTIVE WASTE (HTRW) PERIMETER AIR MONITORING

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

Obtaining and complying with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations is the Contractor's responsibility.

3.2 LAND RESOURCES

Confine all activities to areas defined by the drawings and specifications. Identify any land resources to be preserved within the work area prior to the beginning of any construction. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval, except in areas indicated on the drawings or specified to be cleared. Ropes, cables, or guys will not be fastened to or attached to any trees for anchorage unless specifically authorized. Provide effective protection for land and vegetation resources at all times, as defined in the following subparagraphs. Remove stone, soil, or other materials displaced into uncleared areas.

3.2.1 Work Area Limits

Mark the areas that need not be disturbed under this contract prior to commencing construction activities. Mark or fence isolated areas within the general work area which are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, any markers must be visible in the dark. The Contractor's personnel must be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved must be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. Restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area. Restoration techniques, procedures, and vegetation/seed choices must be approved by the Hill AFB Natural Resources Manager for impacts in the semi-improved and unimproved land designations.

3.2.3 Erosion and Sediment Controls

3.2.3.1 Providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations is the Contractor's responsibility. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. Construct or install temporary and permanent erosion and sediment control best management practices (BMPs) BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Contractors will follow the requirements set forth in the UPDES Storm Water General Permit for Construction Activities, UTR300000 which can be found at:

<http://www.waterquality.utah.gov/UPDES/stormwatercon.htm>

3.2.3.2 Contractors and construction operators are required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and apply sediment and erosion control Best Management Practices (BMPs) as necessary to protect water quality, reduce the discharge of pollutants, and control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality. The SWPPP requirements must be, at a minimum, equivalent with the SWPPP requirement set forth in the UPDES Storm Water General Permit for Construction Activities, UTR300000.

3.2.3.3 Contractor shall attend a pre-construction SWPPP review which includes a review of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development.

Contractor shall incorporate into the SWPPP opportunities for use of low impact design (LID) and green infrastructure and shall identify such use.

Contractor shall see that storm water inspections are conducted at least biweekly using the Construction Storm Water Inspection Form (Checklist) found on the Utah Division of Water Quality website at:

<http://www.waterquality.utah.gov/UPDES/stormwatercon.htm>.

or obtain one from 75 CEG/CEVC.

3.2.3.4 Contractor shall, based on site inspection findings, including the contractors site inspections, inspections by Base personnel or state personnel, take all necessary follow-up actions to ensure compliance with the storm water permit.

All SWPPP’s must be reviewed and approved by 75 CEG/CEVC prior to submitting for a storm water construction permit from the DWQ.

3.2.3.5 Post Construction Storm Water Management:

3.2.3.5.1 The Contractor shall minimize the construction sites erosion and sediment loss by: minimizing the disturbance of native soils and vegetation; preserving areas that provide important water quality benefits; taking measures for flood control; and to protect the integrity of natural resources and sensitive areas. The contractor shall consider implementation of structural BMPs, where practicable, that infiltrate, evapotranspire or harvest and use storm water from the site to protect water quality. Structural controls may include green infrastructure practices such as rainwater harvesting, rain gardens, permeable pavement, and vegetated swales. The selection and design of post-construction controls must take into consideration clogging or obstruction issues, freeze-thaw problems, effect on slope stability and groundwater, and the ability to effectively maintain the control. The contractor shall identify the selection process of such structural controls and provide documentation of such process.

3.2.3.5.2 The contractor shall identify specific hydrologic method or methods for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs as part of the SWPPP reviews. Specific criteria which require that Best Management Practices (BMPs) are designed to treat the water from a specific design storm (e.g., the 2-year, 24-hour event) must be incorporated into the post-construction minimum control measure and documented as part of the project.

3.2.3.5.3 For projects with a footprint greater than 5,000 square feet, the predevelopment hydrology of the property must be maintained with regards to the temperature, rate, volume, and duration of flow. EISA Section 438 and the *EPA Technical guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*, shall be implemented.

3.2.3.5.4 Contractor shall submit a Notice of Termination to 75 CEG/CEVC and DWQ within thirty days after completion of all construction activities, completion of final stabilization of all areas and final inspection by 75 CEG/CEVC. Final stabilization is defined as completion of soil disturbing activities and a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover has been established. Remove any temporary measures after the area has been stabilized.

3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities will be made only when approved. Erosion and sediment controls must be provided for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas must be controlled to protect adjacent areas.

3.3 WATER RESOURCES

Monitor all water areas affected by construction activities to prevent pollution of surface and ground waters. Do not apply toxic or hazardous chemicals to soil or vegetation unless otherwise indicated. For construction activities immediately adjacent to impaired surface waters, the Contractor must be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

3.3.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure will be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. Comply with [the State of Utah water quality standards and anti-degradation provisions] [and] [the Clean Water Act Section 404, 2007 Nation Wide Permit Nos. [3,5,6,7,12,14,18,20,23,25,27,30,37,38,39,42,43, 46, and 47]].

3.4 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; must be controlled at all times, including weekends, holidays and hours when work is not in progress. 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 Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with all State and local visibility regulations.

3.4.2 Odors

Odors from construction activities must be controlled at all times. The odors must be in compliance with State regulations and/or local ordinances and may not constitute a health hazard.

3.4.3 Emissions

All new or modified fuel combustion burners must contain Low Oxides of Nitrogen Burner Technology as outlined in Utah Administrative Code R307-401. Hot Water Heaters and Hot Water Boilers require ultra-low NOx as the Best Available Control Technology (BACT). Hot water heaters are also subject to ultra-low NOx, specifically Utah State Construction and Fire Codes Act, Subsection 15A-6-102 Nitrogen Oxide emission limits for natural gas-fired water heaters. All combustion devices rated over 5MMBTU/HR must be permitted by the Base prior to installation and require ultra-low NOx burner technology, or be fitted with a controlled device designed to achieve ultra-low NOx equivalent emissions.

3.6 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

3.6.1 Refrigerants

3.6.1.1 Technicians performing any work whether moving, repairing, replacing, or installing new refrigerant containing equipment must be EPA certified.

3.6.1.2 All refrigerants remain property of the Air Force and must be recovered.

3.6.1.3 Prior to removing or relocating existing equipment the remaining refrigerant must be evacuated from the equipment and all associated piping by a certified recovery or recycling machine. Reclaimed refrigerant will be returned to the government in containers supplied by the Air Force for that purpose.

3.6.1.4 As-Built drawings shall clearly show the type of refrigerants installed and the final working charge of all refrigerant containing equipment.

3.6.1.5 The contractor is not permitted to purchase any refrigerant on behalf of the government. If additional refrigerant is required beyond the pre-charge that comes with the equipment that refrigerant will be provided by the government.

3.6.2 Solid Wastes

Place solid wastes (excluding clearing debris) in containers which are emptied on a regular schedule. Handling, storage, and disposal must be conducted to prevent contamination. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with solid waste. Transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill will be the minimum acceptable offsite solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.6.3 Chemicals and Chemical Wastes

Dispense chemicals ensuring no spillage to the ground or water. Perform and document periodic inspections of dispensing areas to identify leakage and initiate corrective action. This documentation will be periodically reviewed by the Government. Collect chemical waste in corrosion resistant, compatible containers. Collection drums must be monitored and removed to a staging or storage area when contents are within 150 mm (6 inches) of the top. Wastes will be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.6.4 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

3.6.4.1 Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. At a minimum, manage and store hazardous waste in compliance with 40 CFR 262 in accordance with the Installation hazardous waste management plan. Take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. Segregate hazardous waste from other materials and wastes; protect it from the weather by placing it in a safe covered location, and take precautionary measures such as berming or other appropriate measures against accidental spillage. Storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 40 CFR 262, 49 CFR 171 - 178, and applicable State and local laws and regulations is the Contractor's responsibility. Transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. Ensure that all hazardous waste shipping manifests are signed by authorized Hill AFB personnel prior to shipment. Dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials must be immediately reported to the Hill AFB Fire Department (dial 911 while on base), Contracting Officer and the Facility Environmental Office. Cleanup and cleanup costs due to spills are the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

3.6.4.2 All hazardous wastes such as sandblast media, chlorinated solvents, paints and paint thinners, and fuels will be labeled with a Hill AFB issued hazardous waste label and tracked in the Hill AFB inventory management system to ensure timely removal and proper disposal. There shall be no on-base disposal allowed, including use of drains (sanitary, storm, or industrial wastewater) or the ground. The contractor is responsible for properly collecting and disposing contractor generated hazardous waste. Exceptions may be made for small amounts of hazardous waste on a case by case basis. In such cases, with approval, 75 GEG/CEVC may opt to provide containers and take possession of the waste and arrange disposal. Contractor shall include waste handling and disposal costs in their budget because exceptions are not guaranteed. The contractor shall follow the basic requirements which are in the Base Hazardous Waste Management Plan for site requirements, signage and site management, not to include supplies, and services designed for the Base and other costs mentioned above.

3.6.4.3 All drums/containers must be labeled with a hazardous waste label. The proper DOT shipping name, UN numbers, EPA waste number, generator information, and accumulation start date on the label must be filled out. The label must be placed in the upper third of the drum/container. Drums/containers shall be kept closed except when adding waste. Hazardous waste drums must be stored in an area authorized by Environmental Management Division (75 CEG/CEV).

3.6.4.4 All drums used to store hazardous waste must be non-leaking and safe to handle. Drums that are rusty, dented, or leaking should be over-packed. Drums and/or over-packs must be purchased by the Contractor. All drums purchased by the Contractor must be DOT approved for containing Hazardous Waste which may include the following specification numbers 5B, 17E or 17H. The specification numbers are stamped on the bottom of the drum. The contractor shall be responsible to see that proper containers are used. All hazardous waste sites upon the date of receiving hazardous waste must be inspected weekly. In accordance with the Hill AFB hazardous waste management plan, hazardous waste containers can only be stored for 70 days after the accumulation start date.

3.6.4.5 The Contractor shall coordinate with a Hazardous Waste Customer Support Person and obtain from 75 CEG/CEV, north end of Building 5, a site book, a container log and a weekly inspection form. The contractor shall complete an inspection and fill out an inspection checklist each week the containers are on the site. Completed checklists must be forwarded to 75 CEG/CEVC (customer support) every Friday until the drums are properly disposed of by the Contractor. The contractor shall provide a properly filled out Hazardous Waste Manifest to 75 CEG/CEVC for review prior to the removal of any Hazardous Waste from the Base and shall only use a contractor authorized to haul Hazardous Waste to transport the Hazardous waste off Base while meeting all the requirements of 49 CFR. Hazardous waste manifests must be signed by authorized Hill AFB personnel prior to shipment.

3.6.4.6 POL storage larger than 55 gallons requires secondary containment. This may be accomplished by a double-walled container or by a catch basin. Siting of this will be approved by the Base Fire Department and the Environmental Management Division.

3.6.4.7 Storage of oils, greases, chemicals, or other liquids will require secondary containment as described in the Hill AFB hazardous waste management plan for spill prevention and security. A minimum of 40 pounds (18 kg) of absorbent material per 44 gallons (167 liters) of chemical/oil/grease will be on hand for spill control.

3.6.4.8 All spills shall be reported by dialing 911 and giving information as to spill location, type of material and estimated quantity, and if the spill is contained. The Contractor will ensure appropriate personnel protective equipment (PPE) is available to take care of spill cleanup and handling of residue.

3.6.4.9 Spray painting shall utilize high-transfer efficiency equipment with low-volatile organic compound (low-VOC) paints or water base paints. The VOC content of low-VOC paint shall be 3.5 pounds per gallon or less for primers, topcoats, and specialty coatings--for clear coats, 4.3 pounds or less. If a low-VOC paint is not available for the application, a paint waiver shall be obtained from 75 CEG/CEV by contacting the Civil Engineering Project Manager. Uncontrolled spray painting with high-VOC paints shall not be performed.

3.6.4.10 Contractor sites will be maintained at all times. Damage due to erosion and control of fugitive dust will be the responsibility of the Contractor. An on-site review will be conducted by the Contracting Officer, the Construction Engineer, and the Environmental Management Division (75 CEG/CEV) prior to use of any location for contractor setup. A follow-up program for site overview will be maintained by all parties. Release of the site by the Contractor will be accompanied by a final site review, at which time site deficiencies will be noted. The Contractor will have 14 calendar days to correct deficiencies. Final contract payment will be withheld pending completion of the deficiency list.

3.6.4.11 Universal and toxic wastes: Universal wastes include batteries, fluorescent tubes, other mercury containing bulbs, and mercury containing thermostats. Some of these items may be found in a building before demolition or remodeling and should be disposed of properly. Toxic wastes include asbestos, lead based paint and PCBs. Asbestos and lead based paint will be abated before demolition or remodeling; however, older light fixtures may have ballasts which contain dielectric fluid with PCBs. All batteries (usually lead acid), fluorescent tubes, mercury containing bulbs, mercury containing thermostats, and older light ballasts with PCBs will be carefully collected in labeled containers in accordance with all applicable laws. Ideally these items will be recycled; however, disposal may be used when recycling costs are not reasonable. All recycling and disposal will be done in accordance with applicable laws.

3.6.4.12 Asbestos and Lead-Based Paint: The Contractor is cautioned that materials in and around this project may contain asbestos or be coated with Lead-Based Paint (LBP). The government will make every effort to locate and identify all Asbestos Containing Materials (ACM) and LBP prior to bidding; however, this is not always possible. These materials are often hidden and cannot be discovered until after demolition has begun. The failure of the government to identify all ACM and LBP in no way relieves the Contractor from his legal obligation to comply with state and federal regulations regarding the handling of asbestos, lead, or LBP. If suspected asbestos containing materials or LBP surfaces are encountered, immediately cease work and notify the Contracting Officer and the project manager immediately. Do not conduct or continue with any work that will violate any Air Force, local, state or federal regulations regarding asbestos, lead, or LBP. If suspected materials or surfaces have not been disturbed, secure and post signs in the area where the materials are located to ensure that they are not disturbed. If the suspected materials have already been disturbed, secure and post signs in the area where the material was originally located, any areas to which materials have been moved, and any containers that suspect materials may have been placed in. Take all necessary steps to ensure that materials are not further disturbed, moved, or disposed of until directed to do so by the Contracting Officer. Failure to notify the government promptly or failure to comply with state and federal regulations will be grounds for termination of their contract and may result in other appropriate civil and/or criminal actions. "The Contractor will be fully responsible for any and all fines or other penalties resulting from his acts and /or omissions pursuant to law and regulation. At the Pre-Construction Conference, the contractor will be required to sign the "Contractor's Notification of Hazardous Materials Requirements" at the end of this Section. The government will perform asbestos and lead-based paint surveys for every renovation and demolition project. These surveys shall be posted on site prior to starting any work and must be maintained on site until the project has been completed.

3.6.4.13 Standards for Demolition and Renovation: The contractor shall comply with 40 CFR 61.145 “Standard for Demolition and Renovation” and the Utah Administrative Code R307-801 “Utah Asbestos Rule.” The contractor shall complete the applicable Utah Division of Air Quality notification form with the assistance of the government's project manager and the Base Asbestos Manager. The contractor shall submit the applicable form to the State with a copy sent to the government's Project Manager. Forms are available at the following web site:

<https://deq.utah.gov/legacy/forms/air-quality/asbestos-forms.htm>

3.6.4.14 Banned Ozone Depleting Substances (ODS): Heating, Ventilating and Air Conditioning equipment which use chlorofluorocarbon (CFC) refrigerants are strictly prohibited. This includes but is not limited to R-11, R-12, R-13, R111, R-112, R-113, R-114, R-115, R-211, R-212, R-213, R-214, R-215, R-216 and R-217. Fire protection systems using Halon 1211, 1301 or 2402 are also prohibited. Other substances banned from use on the work site include carbon tetrachloride, methyl chloroform and methyl bromide.

3.6.5 Fuel and Lubricants

Storage, fueling, and lubrication of equipment and motor vehicles must be conducted in a manner that affords the maximum protection against spill and evaporation. Manage and store fuel, lubricants, and oil in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded must be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279 *Standards for the Management of Used Oil* , State, and local laws and regulations. Storage of fuel on the project site for construction activities is not allowed. Fuel must be brought to the project site each day that work is performed. All permanent fuel storage tanks constructed for generators, etc must have spill containment for 110% of stored fuel. Any tanks needed for chemicals, oils, and other liquids must have spill containment for 110% of stored product.

3.6.6 Waste Water

Disposal of waste water will be as specified below.

a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. will not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction related waste water [off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.

b. Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing will be discharged into the HAZARDOUS WASTE TREATMENT following notification to the Treatment Plant's Operator.

3.7 RECYCLING AND WASTE MINIMIZATION

Participate in State and local government sponsored recycling programs. Maintain a recycling inventory and include this in the diversion report specified under 3.8.4. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

3.8 NON-HAZARDOUS SOLID WASTE DIVERSION

3.8.1 Concrete and Excavated soils that have been determined to be “clean” shall be managed by disposing in an off-base Class I, II, III, IV or V permitted landfill. The contractor shall submit a copy of the receipt for the landfill fee to the Contracting Officer to confirm proper disposal.

3.8.2 Asphalt debris may be reused as road base on Hill AFB only. Otherwise, asphalt debris shall be managed by disposing in an off-base Class I, II, III, IV or V permitted landfill. The contractor shall submit a copy of the receipt for the landfill fee to the Contracting Officer to confirm proper disposal.

3.8.3 All non-recyclable, non-hazardous solid waste shall be sent to off base permitted disposal facilities. Other questions regarding the disposal of non-hazardous solid waste should be directed to the Civil Engineering Project Manager.

3.8.4 The Contractor is required to develop a comprehensive Solid Waste Management Plan detailing how the contractor will achieve a minimum of 60 percent waste diversion by weight of the project construction waste and demolition debris/waste from the landfill or incinerator. See Specification Section 01 74 19. Maintain an inventory of non-hazardous solid waste diversion and disposal of construction and demolition debris. Submit a report through the Contracting Officer on the first working day after each quarter, starting the first quarter that non-hazardous solid waste has been generated. A form template may be obtained from the Civil Engineering project manager. Include the following in the report:

a. Construction and Demolition (C&D) Debris Disposed = [\_\_\_\_\_] in tons.

b. Construction and Demolition (C&D) Debris Recycled = [\_\_\_\_\_] in tons.

c. Total C&D Debris Generated = [\_\_\_\_\_] in tons.

d. Receipts for waste sent to landfills. [\_\_\_\_\_] in tons.

3.9 CULTURAL RESOURCES

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NOTE: If there are known cultural resources on the project site, the resource(s) should be shown on the drawings along with their required protection measures.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

If during excavation or other construction activities any previously unidentified or unanticipated cultural resources are discovered or found Standard Operating Procedures 5-6 as outlined in the Hill AFB Integrated Cultural Resources Management Plan will be followed.

3.10 NATURAL RESOURCES

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NOTE: The Designer must specify any special protection requirements and specifically describe how the Contractor is to protect the resources. This paragraph should be used when the Government knows of resources which should be protected and there are no requirements under Federal, State or local laws or regulations which would ensure that the Contractor would provide protection. If there are known Endangered or Threatened Species onsite or in the area including their habitat, this paragraph must identify the species and/or their habitat and must include any requirements or methods for protection. This information can be obtained from the Hill AFB Natural Resources Manager.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3.10.1 Minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The protection of threatened and endangered, or State Sensitive animal and plant species, including their habitat, is the Contractor's responsibility in accordance with Federal, State, Regional, and local laws and regulations.

3.10.2 Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved must be clearly indicated by marking, fencing, wrapping, or other approved techniques. Restore landscape features damaged or destroyed during construction operations outside the limits of approved work area. Restoration techniques, procedures, and vegetation/seed choices must be approved by the Hill AFB Natural Resources manager for impacts in the semi-improved and unimproved land designations. In addition, any trees removed during construction of a project must be replaced according to the Hill Air Force Base Tree Replacement Policy. A replacement plan will be developed and agreed upon prior to construction land preparation.

3.11 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel must be trained in all phases of environmental protection and pollution control. Conduct environmental protection/pollution control meetings for all personnel prior to commencing construction activities. Additional meetings must be conducted for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of cultural resources, wetlands, and endangered species and their habitat that are known to be in the area.

3.12 POST CONSTRUCTION CLEANUP

The Contractor will clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area must be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section 01 57 20 –­

ENVIRONMENTAL PROTECTION