
USACE / NAVFAC / AFCEA / NASA UFGS-01 57 20.00 10 (April 2006)

Preparing Activity: USACE Superseding
UFGS-01355A (February 2005)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2011

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ENVIRONMENTAL PROTECTION
04/06

NOTE: This guide specification covers the requirements for environment protection during construction activities.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

PART 1 GENERAL

NOTE: This specification serves as a general environmental section for construction contracts. It integrates the DOD Pest Management Program and DA Environmental Program policies and requirements for USACE construction activities that occur on military installations and/or are funded under the military construction/O&M funding. Army Environmental Program policies are promulgated in the following regulations, DA AR 200-1 (Environmental Protection and Enhancement). Department of Defense Instruction 4150.7 promulgates Pest Management policies for the component services, as implemented by their respective regulations. USACE civil works pest management activities are not regulated by DOD policies but by ER 1130-2-540 and EP 1130-2-540.

Chemistry and Industrial Hygiene Designers are required to edit this portion of the specification when an air pathway analysis indicates perimeter air monitoring and controls are warranted.

Designers need to ensure that the project design and contemplated methods of construction comply with all applicable laws, including: Clean Air Act (CAA), Clean Water Act (CWA), Coastal Zone Management Act (CZMA), Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Emergency Planning and Community Right to Know Act (EPCRA), Endangered Species Act (ESA), Fish and Wildlife Coordination Act (FWCA), Marine Protection, Research, and Sanctuaries Act (MPRSA), National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), National Pollutant Discharge Elimination System (NPDES), Oil Pollution Act (OPA), Research and Sanctuaries Act, Native American Graves Protection and Repatriation Act (NAGPRA), Resource Conservation and Recovery Act (RCRA), Rivers and Harbors Act of 1899 (R&H), Safe Drinking Water Act (SDWA), Toxic Substance Control Act (TSCA), Wild & Scenic Rivers Act (WSRA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and Subsequent Executive Orders. Many construction contracts contain paragraphs in the technical provisions that discuss specific operations which provide for the prevention of pollution. Because specialists familiar with problems in their field of activity are to prepare individual sections of the technical provisions, those sections should contain specifications for the control of pollution when applicable to the operation covered by the section.

This guide specification addresses hazardous waste only to the extent that it is Contractor generated. For clean up and removal of Government generated hazardous waste, Section 01 35 29.13 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES, Section 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS or other appropriate specifications must be included in the project.

Land resources which are to be protected by the Contractor should be identified on the contract drawings. Any special protective actions for land resources should be specified in this section or in other appropriate sections.

This guide specification contains environmental requirements for many different types of projects. The Designer will delete, add, or modify these requirements to assure that only applicable or possible applicable environmental conditions specific to the project are addressed. The Designer, when deleting requirements in the body of the specification, should also delete the applicable definition and references.

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

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.

U.S. AIR FORCE (USAF)

AFI 32-1053 (2009) Integrated Pest Management Program

U.S. ARMY (DA)

DA AR 200-1 (2007) Environmental Protection and Enhancement

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2008; Errata 1-2010; Changes 1-3 2010; Changes 4-6 2011) Safety and Health Requirements Manual

WETLANDS DELINEATION MANUAL (1987) Corps of Engineers Wetlands Delineation Manual

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

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
49 CFR 171 - 178	Hazardous Materials Regulations

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. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

1.2.5 Project Pesticide Coordinator

The Project Pesticide Coordinator (PPC) is an individual that resides at a Civil Works Project office and that is responsible for oversight of pesticide application on Project grounds.

1.2.6 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor must discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Land Application must be in compliance with all applicable Federal, State, and local laws and regulations.

1.2.7 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.8 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.9 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

1.2.10 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.11 Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLANDS DELINEATION MANUAL.

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

Ensure compliance with this section by 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

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project. Submittals should be kept to the minimum required for adequate quality control.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.] [information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan[; G][; G, [_____]]

1.7 ENVIRONMENTAL PROTECTION PLAN

NOTE: The Environmental Protection Plan is to be edited to include any additional environmental concerns or plans that may be required for the construction Contractor to protect the environment during construction of the project. The Designer should coordinate the requirements with the Facility, Installation, or Project Environmental Offices in addition to the Federal, State Regional and Local governing agencies.

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

Any unnecessary or inapplicable plans or requirements are to be deleted.

Brackets in item j. should be replaced with the name of the Facility, Installation, or Project Office where the project is located; the title of their spill control plan; and where it may be reviewed by the Contractor. Instead of referencing their plan, the Designer could add specific requirements of the plan to this paragraph.

The pesticide paragraph (item q.) should not be deleted since an unforeseen site condition could require a pesticide treatment. The pesticide treatment plan serves two purposes: It provides a

mechanism for early coordination with the appropriate installation personnel through the Contracting Officer and provides a mechanism for reporting pesticide use information to the Installation as required by the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). For military construction, this information must be provided to the Installation under DoDI 4150.7 DoD Pest Management Instruction, under DA AR 200-1, Chapter 5--Pest Management or under Air Force Instruction AFI 32-1053 Integrated Pest Management.

The Designer should coordinate this section with others sections requiring pesticide application (32 92 19 SEEDING, 32 92 23 SODDING, 32 92 26 SPRIGGING, 32 93 00 EXTERIOR PLANTS, and 32 05 33 LANDSCAPE ESTABLISHMENT) and with the Installation's Pest Management organization for any additional requirements.

Include in the environmental protection plan, but not limit it to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. 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 erosion and sediment control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.
- f. 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.
- g. 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 paved public roads by vehicles or runoff.
- h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

- 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, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1 [and the [____]]. 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 local Fire Department] [Facility Fire Department] [Facility Response Personnel] [Facility Environmental Office] in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) 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 and methods of accomplishing 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 cubic meters yards or tons along with the percent that was diverted.

- (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 historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands 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. Include and update a pesticide treatment plan, as information becomes available. Include in the plan: sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. Federal, State, Regional and Local pest management record keeping and reporting requirements as well as any

additional Installation Project Office specific requirements are the Contractor's responsibility in conformance with [DA AR 200-1 Chapter 5--Pest Management, Section 5-4 "Program requirements"] [AFI 32-1053 Sections 3.4.13 and 3.4.14] for data required to be reported to the Installation.

1.7.3 Appendix

Attach to the Environmental Protection Plan, as an appendix, copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents.

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 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

NOTE: The special environmental requirements with which the Contractor must comply must be developed during the design process, included in the bidding documents, and made a part of the contract. The special environmental requirements must be developed by the Designer from such documents as the National Environmental Policy Act (NEPA) compliance measures specified in the Environmental Assessment (EA) or the Environmental Impact Statement (EIS), the Installation Master Plan, or the Installation Storm Water Management Plan. For Civil Works projects, the Environmental commitments made during planning are usually tracked by Project Management. Coordination with the Project Manager is essential in developing the special requirements.

Attachments referenced below and in paragraph ENVIRONMENTAL PERMITS AND COMMITMENTS, which require Contractor's actions, should be listed in the blank provided and attached at the end of this Section. Remove this paragraph if not required in the project after coordination with paragraph ENVIRONMENTAL PERMITS AND COMMITMENTS.

Comply with the special environmental requirements listed here [_____] and attached at the end of this section.

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

NOTE: The following paragraph pertains to HTRW construction when the Designer has determined that the need to protect Air Quality during HTRW remedial action is necessary and appropriate. The paragraph applies to contaminant emissions to the air from HTRW remedial action construction area sources. The Designer should coordinate the editing of Section 01 35 45.00 10 CHEMICAL DATA QUALITY CONTROL so that the Chemistry Data Package, FSP and QAPP meet air monitoring reporting and instrument/sample collection and analysis needs.

An air pathway analysis needs to be conducted prior to specifying the items in the subparagraphs below. The Designer is referred to EP 1110-1-21 Air Pathway Analysis (APA) for the Design of HTRW Remedial Action Project. Design perimeter air monitoring requirements (action levels for the contaminants of concern, monitoring/sampling frequency) based on APA results. Specify monitoring/sampling and analytical requirements in Section 01 35 45.00 10 CHEMICAL DATA QUALITY CONTROL. Specify airborne contaminants of concern, action levels, monitoring/sampling locations below. See 40 CFR 300.430(e)(9) of the National Contingency Plan.

For the protection of public health, monitor and control contaminant

emissions to the air from HTRW remedial action area sources to minimize short term risks that might be posed to the community during implementation of the remedial alternative in accordance with the following.

1.12.1 Perimeter Air Contaminant of Concern

[____].

1.12.2 Time Averaged Perimeter Action Levels

[____].

- a. Concentration [____].
- b. Time [____].

1.12.3 Perimeter Sampling/Monitoring Location[s]

[____].

1.12.4 Monitoring Instruments/Sampling and Analysis Methods

NOTE: Section 01 35 45.00 10 CHEMICAL DATA QUALITY
CONTROL should be edited to reflect appropriate
instruments/sampling and analytical methods which
meet required action levels.

[____].

1.12.5 Staffing

NOTE: See staffing requirements in Section
01 35 45.00 10 CHEMICAL DATA QUALITY CONTROL and
assure that it is edited so that qualified personnel
are used to operate instruments, take samples, and
perform analysis.

[____].

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOTE: Edit and/or delete the following paragraphs
to reflect project requirements only.

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

NOTE: The terms and conditions contained in any
environmental permits and environmental commitments
obtained by the Government must be made a part of

the contract. The design must be in accordance with these permits and commitments. The title and requirements of this paragraph may be changed to include environmental reviews and approvals, if pertinent. This paragraph shall be coordinated with the SPECIAL ENVIRONMENTAL REQUIREMENTS paragraph. If the Government has not obtained any environmental permits, commitments, approvals, etc., the first bracketed sentence should be deleted and the second bracketed sentence should be used.

[This paragraph supplements the Contractor's responsibility under the contract clause "PERMITS AND RESPONSIBILITIES" to the extent that the Government has obtained the [____]. Comply with the terms and conditions of the attached [____] at the end of this section.] [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.

3.2.3 Erosion and Sediment Controls

NOTE: This paragraph must be edited to reflect the specific requirements of the project. In place of the blank brackets, enter the name of the Installation, Facility, or Project Office.

If the National or State Pollutant Discharge Elimination System Permit for Storm Water Discharges from Construction Sites over 5 acres of Land Disturbance is not required, but the project site is covered under an existing NPDES Industrial Storm Water Permit, the requirements of that permit will be added to this paragraph, shown on the drawing, and/or attached to this specification.

Providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations is the Contractor's responsibility. Select and maintain the erosion and sediment controls 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) [as indicated on the drawings] [as specified in Section 01 57 23 TEMPORARY STORM WATER POLLUTION CONTROL]. 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. [The Contractor's best management practices must also be in accordance with the [_____] National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP) which may be reviewed at the [_____] Environmental Office.] 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 designated on the drawings or 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

NOTE: Edit the first sentence by removing items not included in the project.

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 [_____] water quality standards and anti-degradation provisions] [and] [the Clean Water Act Section 404, Nation Wide Permit No. [_____]].

3.3.2 Stream Crossings

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments. [Construction of stream crossing structures will be in compliance with Clean Water Act Section 404, Nation Wide Permit No. [_____] .]

3.3.3 Wetlands

NOTE: All wetlands on the site or adjacent to the site must be identified on the drawings and this paragraph edited accordingly. If the wetlands on site must be disturbed, the Designer is responsible for the coordination with the regulatory agencies during design for identification of Section 404 of the Clean Water Act permits whether the permit is an Individual, Nationwide, Regional, State, or Local 404 or similar permit. All permit requirements are to be included in the ENVIRONMENTAL PERMITS AND COMMITMENTS paragraph and attached to this specification. In addition, the Designer must coordinate any mitigation requirements for the project.

If no wetlands are onsite or adjacent to the site, delete this paragraph in its entirety. The first sentence should normally remain intact with the first bracketed item. This will require the Contractor to be cognizant of the responsibility to protect wetlands regardless of whether they are identified on drawings or in the event site conditions have changed since design.

Do not enter, disturb, destroy, or allow discharge of contaminants into any wetlands[.] [except as authorized herein. The protection of wetlands shown on the drawings in accordance with paragraph ENVIRONMENTAL PERMITS AND COMMITMENTS is the Contractor's responsibility. Authorization to enter specific wetlands identified will not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.]

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

NOTE: This is a general performance type requirement for particulate control. For projects where special construction activities, such as

concrete batch plants, or extensive earthwork are involved, the Designer should consider the need for a more descriptive specification giving methods, frequency of application, and monitoring methods for controlling 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 Sound Intrusions

NOTE: Insert State's name or remove last sentence when State rules are not applicable. The Designer should further address any facility specific requirements such as operational hours around base housing etc.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of [_____] rules.

3.4.4 Burning

NOTE: Edit the paragraph after coordinating with the governing agencies.

[Burning is prohibited on the Government premises.] [Burning will not be allowed on the project site unless specified in other sections of the specifications or authorized in writing by the Contracting Officer. The specific time, location, and manner of burning will be subject to approval.] [Confine fires to a closed vessel, guarded at all times, and under constant surveillance until contents have burned out or have been extinguished.] [Burning must completely reduce the materials to ashes.]

3.5 HTRW AIR EMISSION CONTROL

NOTE: Edit the paragraphs below so the Contractor controls emissions to the air if action levels are exceeded. Use air pathway analysis results to help edit paragraphs/specify requirements. The following paragraphs should be used when an air pathway analysis has been conducted for HTRW remedial action.

Implement the following control(s) to meet or exceed performance levels identified in HTRW PERIMETER AIR MONITORING.

3.5.1 Air Emission Control to Meet Action Levels

[_____].

3.5.2 Excavation/Production/Processing Rate Reduction

[_____].

3.5.3 Exposed Surface Area Reduction

[_____].

3.6 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes will be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.6.1 Solid Wastes

NOTE: Select appropriate disposal alternative. In some states certain quantities of clearing debris may be classified as solid waste. The Designer should include appropriate language to comply with State requirements. Remove non-applicable bracketed options.

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.] [Waste materials will be hauled to the Government landfill site [shown on the drawings] [designated by the Contracting Officer].] [Comply with [site procedures] [Federal, State, and local laws and regulations] pertaining to the use of landfill areas.]

3.6.2 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.

3.6.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

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] [Project Office] 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 49 CFR 171 - 178, 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. 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 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.] [Coordinate the disposition of hazardous waste with the [Facility's] [Project Office's] Hazardous Waste Manager and the Contracting Officer.]

3.6.4 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, State, and local laws and regulations. [Storage of fuel on the project site is not allowed. Fuel must be brought to the project site each day that work is performed.] [Storage of fuel on the project site will be in accordance with all Federal, State, and local laws and regulations.]

3.6.5 Waste Water

NOTE: Edit the following paragraphs after coordination with the Facility, Installation, or Project Office. Usually, a permit to discharge is not required for Land Application but the Designer will be responsible for identifying and including the requirements of the governing agencies. Insert or delete the brackets with the name of process producing the wastewater. If there is an area on

the project site for a retention pond, a choice may be given for disposal in a retention pond. If there is a possibility that the water is contaminated, then appropriate analytical testing should be identified by the Designer.

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.] [by collecting and placing it in a retention pond where suspended material can be settled out and/or the water can evaporate to separate pollutants from the water. The site for the retention pond must be coordinated and approved with the Contracting Officer. The residue left in the pond prior to completion of the project will be removed, tested, and disposed off-Government property in accordance with Federal, State, and local laws and regulations. The area must be backfilled to the original grade, top-soiled and seeded/sodded. [Test the water in the retention pond for [_____] and have the results reviewed and approved by the Contracting Officer, prior to being discharged or disposed off-Government property].]
- b. For discharge of ground water, the Contractor will [obtain a State or Federal permit specific for pumping and discharging ground water prior to surface discharging.] [surface discharge in accordance with all Federal, State, and local laws and regulations.] [surface discharge in accordance with the requirements of the NPDES or State STORM WATER DISCHARGES FROM CONSTRUCTION SITES permit.] [land apply on the project site in accordance with all Federal, State, Regional, and/or Local laws and regulations for pumping and land applying ground water.]
- c. Water generated from the flushing of lines after [disinfection or disinfection in conjunction with hydrostatic testing] [hydrostatic testing] will be [land applied in accordance with all Federal, State, and local laws and regulations for land application] [discharged into the sanitary sewer with prior approval and/or notification to the Waste Water Treatment Plant's Operator].

3.7 RECYCLING AND WASTE MINIMIZATION

NOTE: See Executive Order 13101, September 14, 1998, GREENING THE GOVERNMENT THROUGH WASTE PREVENTION, RECYCLING, AND FEDERAL ACQUISITION and DoD Instruction 4715.4 Pollution Prevention. For Air Force projects, the Designer should see Non-Hazardous Solid Waste Diversion Rate Measure of Merit (MoM) dated 26 JAN 1999. For Military Construction projects, the Designer should contact the Using Service's Environmental Office for additional recycling requirements.

Consider the following items to be include in the paragraph:

(1) Generally, fallen trees should not be openly burned or buried. Consider requiring the Contractor to shred and use as mulch in a metropolitan area. (If trees are to be piled in lakes or on land as refugia for fish or wildlife, this should be shown on the drawings and specified elsewhere and may be referenced in this paragraph.)

(2) Composting.

(3) Recovery of metal from debris and sale to recycling operation with Contractor retaining any money derived from the sale.

(4) Collection of aluminum cans at the job site for recycling.

(5) Old concrete to be recycled as riprap, road base etc.

Coordinate the requirements in this paragraph with Section 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT and Section 02 41 00 {DEMOLITION} {AND} {DECONSTRUCTION}.

Participate in State and local government sponsored recycling programs. The Contractor [is further encouraged to minimize solid waste generation throughout the duration of the project.] [must participate in the following recycling and waste minimization activities to divert non-hazardous solid waste: [____]].

3.8 NON-HAZARDOUS SOLID WASTE DIVERSION REPORT

NOTE: The Designer must edit the Non-hazardous Solid Waste Diversion Report to reflect the Using Service's requirements.

Maintain an inventory of non-hazardous solid waste diversion and disposal of construction and demolition debris. Submit a report to [____] through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that non-hazardous solid waste has been generated. Include the following in the report:

- a. Construction and Demolition (C&D) Debris Disposed = [____] in cubic meters cubic yards or tons, as appropriate.
- b. Construction and Demolition (C&D) Debris Recycled = [____] in cubic meters cubic yards or tons, as appropriate.
- c. Total C&D Debris Generated = [____] in cubic meters cubic yards or tons, as appropriate.

- d. Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount) = [_____] in cubic meters cubic yards or tons, as appropriate.

3.9 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

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

[Existing historical, archaeological, and cultural resources within the Contractor's work area are shown on the drawings. Protect these resources and be responsible for their preservation during the life of the Contract.] If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources will be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.10 BIOLOGICAL 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.

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

3.11 INTEGRATED PEST MANAGEMENT

NOTE: DoD Installations are required under DoDI 4150.7 to develop an integrated pest management plan (IPMP). The Facility IPMP has been developed by the installation to identify potential pest-related risks of damage to installation properties as well as approaches to be used to limit these risks. The Designer should coordinate with the Installation Pest Management Coordinator early in the design process to address structural, landscaping and other pest damage reduction alternatives to pesticide applications when cost effective. This effort may be multidisciplinary in scope (i.e. planner/landscape architect, natural resource manager etc.). The pest management plans and strategies developed during design and construction should be reviewed and approved by DoD pest management professionals and coordinated with IPMC as required by DA AR 200-1 and DoDI 4150.7.

The following paragraph is to be used when the application of pest management chemicals is OR is NOT anticipated. These requirements must be included as a plan within the Environmental Protection Plan. When a pest is known to be in the soil, the Designer should identify the pest and the area to be treated. This paragraph should be left intact to cover pesticide applications not anticipated by the Designer. When termiticide is required, the Designer should include the bracketed sentence and include Section 33 40 00 STORM DRAINAGE in the contract specifications. Delete last sentence when not applicable. The "installation pest management coordinator" is a term used in DA AR 200-1 Pest Management. DA AR 200-1 is not applicable to USACE Civil Works activities. Appropriate USACE personnel should be referenced when this specification is used for civil works. See CECW-ON EP 1130-2-540 ENVIRONMENTAL STEWARDSHIP OPERATIONS AND MAINTENANCE GUIDANCE AND PROCEDURES, Chapter 3 - Pest Control Program for Civil Works Projects.

In order to minimize impacts to existing fauna and flora, the Contractor through the Contracting Officer, must coordinate with the Installation Pest Management Coordinator (IPMC) Project Pesticide Coordinator (PPC) at the earliest possible time prior to pesticide application. Discuss integrated pest management strategies with the [IPMC] [PPC] and receive concurrence from the [IPMC] [PPC] through the COR prior to the application of any pesticide associated with these specifications. Installation Project Office Pest Management personnel will be given the opportunity to be present at all meetings concerning treatment measures for pest or disease control and during application of the pesticide. [For termiticide requirements see Section 31 31 16 SOIL TREATMENT FOR SUBTERRANEAN TERMITE CONTROL.] The use and management of pesticides are regulated under 40 CFR 150 - 189.

3.11.1 Pesticide Delivery and Storage

Deliver pesticides to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Store pesticides according to manufacturer's instructions and under lock and key when unattended.

3.11.2 Qualifications

For the application of pesticides, use the services of a subcontractor whose principal business is pest control. The subcontractor must be licensed and certified in the state where the work is to be performed.

3.11.3 Pesticide Handling Requirements

Formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and use the clothing and personal protective equipment specified on the labeling for use during all phases of the application. Furnish Material Safety Data Sheets (MSDS) for all pesticide products.

3.11.4 Application

Apply pesticides using a State Certified Pesticide Applicator in accordance with EPA label restrictions and recommendation. The Certified Applicator must wear clothing and personal protective equipment as specified on the pesticide label. The Contracting Officer will designate locations for water used in formulating. Do not allow the equipment to overflow. All equipment must be inspected for leaks, clogging, wear, or damage and repaired prior to application of pesticide.

3.12 PREVIOUSLY USED EQUIPMENT

Clean all previously used construction equipment prior to bringing it onto the project site. Ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the USDA jurisdictional office for additional cleaning requirements.

3.13 MAINTENANCE OF POLLUTION FACILITIES

Maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.14 MILITARY MUNITIONS

NOTE: Remove this paragraph if not needed in the project.

In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, the Contractor will immediately stop work in that area and immediately inform the Contracting Officer.

3.15 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 archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.16 CONTAMINATED MEDIA MANAGEMENT

NOTE: Remove this paragraph if not needed in the
project.

Manage contaminated environmental media consisting of, but not limited to, ground water, soils, and sediments in accordance with Section [____].

3.17 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 --