

2. AMENDMENT/MODIFICATION NO. 4	3. EFFECTIVE DATE 25-Feb-2004	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. <i>(If applicable)</i>
6. ISSUED BY US Army Corps of Engineers, Kansas City District 760 Federal Building, 601 East 12th Street Kansas City, Missouri 64106-2896		7. ADMINISTERED BY <i>(If other than item 6)</i>	

8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>	(x)	9a. AMENDMENT OF SOLICITATION NO. W912DQ-04-R-0004
	X	9B. DATED <i>(SEE ITEM 11)</i> 2/2/2004
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED <i>(SEE ITEM 13)</i>

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above number solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing Items 8 and 15, and returning one copy of the amendment. (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegraph which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(x)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBER CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF:
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

DEMOLITION OF USDB CASTLE, FORT LEAVENWORTH, KANSAS

The Solicitation is amended in accordance with the attached pages.
**RECEIPT OF PROPOSALS IS DELAYED TO 3:00 PM ON 8 MARCH 2004, RM 756 FEDERAL BLDG,
 601 E. 12TH STREET, KANSAS CITY, MO 64106-2896.**

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>	16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>
15B. CONTRACTOR/OFFEROR	16B. UNITED STATES OF AMERICA
15C. DATE SIGNED	16C. DATE SIGNED
_____ <i>(Signature of person authorized to sign)</i>	BY _____ <i>(Signature of Contracting Officer)</i>

SOLICITATION is amended in accordance with the following:

1. SPECIFICATIONS: The following sections are deleted and replaced with revised sections of the same numbers. For convenience, on the revised specification pages, essential changes have been emphasized by underlining. However, all portions of the revised specification pages shall apply whether or not changes have been indicated. Copies of the changed sections are attached.

01525
02220
02233
02300a
13281A

2. DRAWINGS: The following is a clarification for Drawing GA000:

GENERAL CONDITIONS: Other buildings inside the walls of the USDB complex are fully operational and will remain so during all phases of construction. Government employees and delivery vehicles will be using this road daily. There is only one road to gain entry or exit to the USDB prison compound. Traffic for the Contractor and Government employees must use the same road to access these areas. The Contractor shall not impede or interfere with Government vehicular traffic into and out of the USDB prison compound. The road/drive located west of and directly adjacent to buildings 477 and 478 must remain accessible for Government and delivery vehicles at all times during the execution of this project.

3. RECEIPT OF PROPOSALS IS DELAYED UNTIL 3:00 PM ON 8 MARCH 2004 IN ROOM 756 FEDERAL BUILDING, 601 EAST 12TH STREET, KANSAS CITY, MISSOURI 64106-2896.

SECTION 01525

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS
11/02

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.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z359.1 (1999) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

ASME B30.5 (2000) Mobile and Locomotive Cranes

ASME B30.8 (2000) Floating Cranes and Floating Derricks

ASME B30.22 (2000) Articulating Boom Cranes

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910 Safety and Health Regulation in General Industry

29 CFR 1910.94 Ventilation

29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

29 CFR 1910.146 Permit-required Confined Spaces

29 CFR 1915 Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.65 Hazardous Waste Operations and Emergency Response

29 CFR 1926.500 Fall Protection

U. S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (1998) Portable Fire Extinguishers

NFPA 70 (2002) National Electrical Code

NFPA 241 (2000) Safeguarding Construction, Alteration, and Demolition Operations

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, RE.

Activity Hazard Analysis (AHA); G, RE.

Crane Critical Lift Plan; G, RE.

SD-06 Test Reports

Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

Monthly Exposure Reports

Submit monthly exposure reports by the 10th of the following month.

Regulatory Citations and Violations

Crane Reports

[Certificate of Compliance (Crane)]

SD-07 Certificates

Confined Space Entry Permit

Submit one copy of each permit attached to each Daily Quality Control Report.

1.3 DEFINITIONS

- a. Associate Safety Professional (ASP). An individual who is currently certified by the Board of Certified Safety Professionals.
- b. Certified Construction Health & Safety Technician (CHST). An individual who is currently certified by the Board of Certified Safety Professionals.
- c. Certified Industrial Hygienist (CIH). An individual who is currently certified by the American Board of Industrial Hygiene.
- d. Certified Safety Professional (CSP). An individual who is currently certified by the Board of Certified Safety Professionals.
- e. Certified Safety Trained Supervisor (STS). An individual who is currently certified by the Board of Certified Safety Professionals.
- f. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.
- g. Low-slope roof. A roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

h. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

i. Multi-Employer Work Site (MEWS). A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

j. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

k. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

- (1) Death, regardless of the time between the injury and death, or the length of the illness;
- (2) Days away from work;
- (3) Restricted work;
- (4) Transfer to another job;
- (5) Medical treatment beyond first aid;
- (6) Loss of consciousness; or
- (7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

l. Site Safety and Health Officer (SSHO). The superintendent or other qualified or competent person who is responsible for the on-site safety and health required for the project. The Contractor quality control (QC) person cannot be the SSHO, even though the QC has safety inspection responsibilities as part of the QC duties.

m. Steep roof. A roof having a slope greater than 4 in 12 (vertical to horizontal).

n. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.

o. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).]

1.4 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations: Kansas Department of Health and Environment . Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.5 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Contracting Officer upon request.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The SSHO and CQC cannot be the same person. Per Section 01451A, paragraph titled "Personnel Requirements", the Safety and Health Manager shall receive direction and authority from the CQC System Manager. Per Section 01451A, paragraph titled "Additional Personnel", the CQC Manager shall have no other duties. The SSHO shall meet the following requirements:

TEXT DELETED.

Level 3:

- A minimum of 5 years safety work on similar projects.
- 30-hour OSHA construction safety class or equivalent within the last 5 years.
- An average of at least 24 hours of formal safety training each year for the past 5 years.
- Competent person training as needed.]

TEXT DELETED.

1.6.1.2 Certified Safety Professional (CSP) and/or Certified Industrial hygienist (CIH)

See Section 13280A ASBESTOS ABATEMENT for the requirements of the Certified Industrial Hygienist.

1.6.1.3 Competent Person for Confined Space Entry

Provide a competent person meeting the requirements of EM 385-1-1 who is assigned in writing by the Designated Authority to assess confined spaces and who possesses demonstrated knowledge, skill and ability to:

- a. Identify the structure, location, and designation of confined and permit-required confined spaces where work is done;
- b. Calibrate and use testing equipment including but not limited to, oxygen indicators, combustible gas indicators, carbon monoxide indicators, and

carbon dioxide indicators, and to interpret accurately the test results of that equipment;

- c. Perform all required tests and inspections specified in 29 CFR 1910.146 and 29 CFR 1915 Subpart B;
- d. Assess hazardous conditions including atmospheric hazards in confined space and adjacent spaces and specify the necessary protection and precautions to be taken;
- e. Determine ventilation requirements for confined space entries and operations;
- f. Assess hazards associated with hot work in confined and adjacent space and determine fire watch requirements; and,
- g. Maintain records required.

1.6.1.4 Competent Person for the Health Hazard Control and Respiratory Protection Program

Provide a competent person meeting the requirements of EM 385-1-1 who is:

- a. Capable by education, specialized training and/or experience of anticipating, recognizing, and evaluating employee exposure to hazardous chemical, physical and biological agents in accordance with USACE EM 385-1-1, Section 6.
- b. Capable of specifying necessary controls and protective actions to ensure worker health.

1.6.1.5 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Appendix G.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)/Superintendent

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily [production][quality control] report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work

stoppage will remain in effect pending approval of a suitable replacement.

1.6.2.2 Certified Industrial Hygienist (CIH)

- a. Perform safety and occupational health management, surveillance, inspections, and safety enforcement for the project.
- b. Perform as the safety and occupational health "competent person" as defined by USACE EM 385-1-1.
- c. Be on site at all times whenever work or testing is being performed.
- d. Conduct and document safety inspections.
- e. Shall have no other duties other than safety and occupational health management, inspections, and enforcement on this contract.

If the CIH is appointed as the SSHO, all duties of that position shall also be performed.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

- a. The Contractor will be informed, in writing, of the date of the preconstruction conference. The purpose of the preconstruction conference is for the Contractor and the Contracting Officer's representatives to become acquainted and explain the functions and operating procedures of their respective organizations and to reach mutual understanding relative to the administration of the overall project's APP before the initiation of work.
- b. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the AHAs and special plans, program and procedures associated with it).
- c. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated activity hazard analyses (AHAs) that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.
- d. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.

1.6.3.2 Weekly Safety Meetings

Conduct weekly safety meetings at the project site for all employees. The Contracting Officer will be informed of the meeting in advance and be allowed attendance. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

1.6.3.3 Work Phase Meetings

The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory and initial phases of quality control inspection. The analysis should be used during daily inspections to ensure the implementation and effectiveness of safety and health controls.

1.7 TRAINING

1.7.1 New Employee Indoctrination

New employees (prime and sub-contractor) will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with USACE EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

1.7.3 Training on Activity Hazard Analysis (AHA)

Prior to beginning a new phase, training will be provided to all affected employees to include a review of the AHA to be implemented.

1.8 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan". Where a paragraph or subparagraph element is not applicable to the work to be performed indicate "Not Applicable" next to the heading. Specific requirements for some of the APP elements are described below at paragraph 1.8.1. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. The Contracting Officer reviews and comments on the Contractor's submitted APP and accepts it when it meets the requirements of the contract provisions.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and quality control manager. Should any unforeseen hazard become evident during the

performance of work, the project superintendent shall inform the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

Copies of the accepted plan will be maintained at the Area Engineer's office and at the job site. The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.8.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be used such as CSPs, CIHs, STSs, CHSTs. The duties of each position shall be specified.

b. Qualifications of competent and of qualified persons. As a minimum, competent persons shall be designated and qualifications submitted for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.

c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with USACE EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, and any other federal, state and local regulatory requirements identified in this contract. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

d. Health Hazard Control Program. The Contractor shall designate a competent and qualified person to establish and oversee a Health Hazard Control Program in accordance with USACE EM 385-1-1, Section 6. The program shall ensure that employees, on-site Government representatives, and others, are not adversely exposed to chemical, physical and biological agents and that necessary controls and protective actions are instituted to ensure health.

[e. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of crane hoist's maximum load limit; lifts involving more than one crane or hoist; lifts of personnel; and technically difficult lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks in accordance with USACE EM 385-1-1, paragraph 16.c.18. and submit 15 calendar days prior to on-site work.]

f. Alcohol and Drug Abuse Plan

(1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."

(2) Description of the on-site prevention program

g. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place and during different phases of construction. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 1.8 m (6 feet). A qualified person shall prepare and sign the plan. The plan shall include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, rescue and escape equipment and operations, training requirements, and monitoring methods. Fall Protection and Prevention Plan shall be revised [every six months] for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. The accepted Fall Protection and Prevention Plan shall be kept and maintained at the job site for the duration of the project.

h. Lead Abatement Plan. The safety and health aspects of lead-based paint removal, prepared in accordance with Section 13281A, Lead Hazard Control Activities.]

i. Lead Work Plan. The safety and health aspects of lead work, prepared in accordance with Section 13282N, "Lead in Construction".]

j. Asbestos Hazard Abatement Plan. The safety and health aspects of asbestos work, prepared in accordance with Section 13280A, Asbestos Abatement.

k. Site Safety, Health and Emergency Response Plan. The safety and health aspects prepared in accordance with Section 01351A.]

l. PCB Plan. The safety and health aspects of Polychlorinated Biphenyls work, prepared in accordance with Sections 13284N, "Removal and Disposal of Polychlorinated Biphenyls (PCBs) and 13285N, "Removal and Disposal of PCB Contaminated Soils)".]

[m. Site Demolition Plan. The safety and health aspects prepared in accordance with Section [02220A, Demolition][02220, "Site Demolition" and referenced sources]] [Include engineering survey as applicable.]

n. Excavation Plan. The safety and health aspects prepared in accordance with Section 02302N, Backfilling, and Compacting for Utilities.]

o. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, vehicle operator, forklift operators, personal protective equipment); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHA as amendments to the APP. An AHA will be developed by the Contractor for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase of work. At a minimum, define activity being performed, sequence of work, specific safety and health hazards anticipated, control measures (to include personal protective equipment) to eliminate or reduce each hazard to acceptable levels, equipment to be used, inspection requirements, training requirements for all involved, and the competent person in charge of that phase of work. For work with fall hazards, including fall hazards

associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include requirements for safeguarding excavations. An activity requiring an AHA shall not proceed until the AHA has been accepted by the Contracting Officer's representative and a meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activity, including on-site Government representatives. The Contractor shall document meeting attendance at the preparatory, initial, and follow-up phases of quality control inspection. The AHA shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

Activity hazard analyses shall be updated as necessary to provide an effective response to changing work conditions and activities. The on-site superintendent, site safety and health officer and competent persons used to develop the AHAs, including updates, shall sign and date the AHAs before they are implemented.

1.10 DISPLAY OF SAFETY INFORMATION

Within 5 calendar days after commencement of work, erect a safety bulletin board at the job site. The following information shall be displayed on the safety bulletin board in clear view of the on-site construction personnel, maintained current, and protected against the elements and unauthorized removal:

- a. Map denoting the route to the nearest emergency care facility.
- b. Emergency phone numbers.
- c. Copy of the most up-to-date APP.
- d. AHA(s).
- e. OSHA 300A Form.
- f. Confined space entry permit.
- g. A sign indicating the number of hours worked since last lost workday accident.]
- h. OSHA Safety and Health Protection-On-The-Job Poster.
- i. Safety and Health Warning Posters.]

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.13 REPORTS

1.13.1 Accident Reports

For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Report Form 3394 and provide the report to the Contracting Officer within 1 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

1.13.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident involving a overturned crane, collapsed boom, or any other major damage to the crane or adjacent property. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on site and Government investigation is conducted.

1.13.3 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be provided on or before the 10th of the following month. No billing will be processed until the MSER is turned in. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

1.13.4 Regulatory Citations and Violations

Contact the Contracting Officer immediately of any OSHA or other regulatory agency inspection or visit, and provide the Contracting Officer with a copy of each citation, report, and contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

1.13.5 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

1.13.6 Certificate of Compliance

The Contractor shall provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. The Contractor shall also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). These certifications shall be posted on the crane.

1.14 HOT WORK

Prior to performing "Hot Work" (welding, etc.) or operating other flame-producing devices, a written permit shall be requested from the Fort Leavenworth Fire Chief. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) twenty (20) pound 4A:20 BC rated

extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity.

- a. Oil painting materials (paint, brushes, empty paint cans, etc.), and all flammable liquids shall be removed from the facility at quitting time. All painting materials and flammable liquids shall be stored outside in a suitable metal locker or box and will require re-submittal with non-hazardous materials.
- b. Accumulation of trays, paper, shavings, sawdust, boxes and other packing materials shall be removed from the facility at the close of each workday and such material disposed of in the proper containers located away from the facility.
- c. The storage of combustible supplies shall be a safe distance from structures.
- d. Area outside the facility undergoing work shall be cleaned of trash, paper, or other discarded combustibles at the close of each workday.
- e. All portable electric devices (saws, sanders, compressors, extension chord, lights, etc.) shall be disconnected at the close of each workday. When possible, the main electric switch in the facility shall be deactivated.
- f. When starting work in the facility, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency 911 phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DEPARTMENT IMMEDIATELY.

PART 2 PRODUCTS

2.1 FALL PROTECTION ANCHORAGE

Fall protection anchorage, conforming to ANSI Z359.1, will be left in place and so identified for continued customer use.

2.2 CONFINED SPACE SIGNAGE

The Contractor shall provide permanent signs integral to or securely attached to access covers for new permit-required confined spaces. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm(one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m(5 feet).

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, and other related submittals and activity fire and safety regulations.

3.1.1 Hazardous Material Use

Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Any work or storage involving hazardous chemicals or materials must be done in a manner that will not expose Government or Contractor employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent

Government or Contractor employees from being exposed to any hazardous condition that could result from the work or storage. The Prime Contractor shall keep a complete inventory of hazardous materials brought onto the work-site. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.3 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If [additional] material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 PRE-OUTAGE COORDINATION MEETING

Contractors are required to apply for utility outages at least 15 days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the Contracting Officer to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

3.3 FALL HAZARD PROTECTION AND PREVENTION

The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and escape procedures.

3.3.1 Training

The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be exposed to fall hazards. Training requirements shall be in accordance with USACE EM 385-1-1, section 21.A.16.

3.3.2 Fall Protection Equipment

The Contractor shall enforce use of the fall protection equipment designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA

at all times when an employee is on a surface 1.8 m(6 feet) or more above lower levels. Fall protection systems such as guardrails, personnel fall arrest system, safety nets, etc., are required when working within 1.8m (6 feet) of any leading edge. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.I. and 05.J. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems may be required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. Fall protection must comply with 29 CFR 1926.500, Subpart M and USACE EM 385-1-1.

3.3.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ANSI Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m (6 feet). The total fall distance shall always be taken into consideration when attaching a person to a fall arrest system.

3.3.3 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

(1) For work within 1.8 m (6 feet) of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets. A safety monitoring system is not adequate fall protection and is not authorized.

(2) For work greater than 1.8 m (6 feet) from an edge, warning lines shall be erected and installed in accordance with 29 CFR 1926.500 and USACE EM 385-1-1.

b. Steep Roofs: Work on steep roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.3.4 Safety Nets

If safety nets are used as the selected fall protection system on the project, they shall be provided at unguarded workplaces, over water, machinery, dangerous operations and leading edge work. Safety nets shall be tested immediately after installation with a drop test of 181.4 kg (400 pounds) and every six months thereafter.

3.3.5 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person in accordance with ANSI Z359.1.

3.3.6 Horizontal Lifelines

Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person as part of a complete fall arrest system (29 CFR 1926.500).

3.4 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access to scaffold platforms greater than 6 m (20 feet) in height shall be accessed by use of a scaffold stair system. Vertical ladders commonly provided by scaffold system manufacturers shall not be used for accessing scaffold platforms greater than 6 m (20 feet) in height. The use of an adequate gate is required. Contractor shall ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Work platforms shall be placed on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.5 EQUIPMENT

3.5.1 Material Handling Equipment

- a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
- c. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

3.5.2 Weight Handling Equipment

- [a. Cranes must be equipped with:
- (1) Load indicating devices (LIDs) and a boom angle or radius indicator,
 - (2) or load moment indicating devices (LMIs).
 - (3) Anti-two block prevention devices.
 - (4) Boom hoist hydraulic relief valve, disconnect, or shutoff (stops hoist when boom reaches a predetermined high angle).
 - (5) Boom length indicator (for telescoping booms).
 - (6) Device to prevent uncontrolled lowering of a telescoping hydraulic boom.
 - (7) Device to prevent uncontrolled retraction of a telescoping hydraulic

boom.]

b. The Contractor shall notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.

c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturer's recommended procedures.

d. The Contractor shall comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes and ASME B30.8 for floating cranes and floating derricks.

e. The presence of Government personnel does not relieve the Contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.

f. Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. Christmas-tree lifting (multiple rigged materials) is not allowed.

g. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.

h. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

i. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.

j. A fire extinguisher having a minimum rating of 10BC and a minimum nominal capacity of 5lb of extinguishing agent shall be available at all operator stations or crane cabs. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.

k. All employees shall be kept clear of loads about to be lifted and of suspended loads.

l. A weight handling equipment operator shall not leave his position at the controls while a load is suspended.

m. Only Contractor crane operators who have met the requirements of 29 CFR 1910.94, 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.500, USACE EM 385-1-1, ASME B30.5, and ASME B30.22 and other local and state requirements shall be authorized to operate the crane.

n. The Contractor shall use cribbing when performing lifts on outriggers.

o. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

p. A physical barricade must be positioned to prevent personnel from

entering the counterweight swing (tail swing) area of the crane.

q. A substantial and durable rating chart containing legible letters and figures shall be provided with each crane and securely mounted onto the crane cab in a location allowing easy reading by the operator while seated in the control station.

r. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.

s. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

t. The Contractor shall certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

3.5.3 Equipment and Mechanized Equipment

a. Equipment shall be operated by designated qualified operators. Proof of qualifications shall be kept on the project site for review.

b. Manufacture specifications or owner's manual for the equipment shall be on site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Such additional safety precautions or requirements shall be incorporated into the AHAs.

c. Equipment and mechanized equipment shall be inspected in accordance with manufacturer's recommendations for safe operation by a competent person prior to being placed into use.

d. Daily checks or tests shall be conducted and documented on equipment and mechanized equipment by designated competent persons.

3.6 EXCAVATIONS

The competent person for excavations performed as a result of contract work shall be on-site when excavation work is being performed, and shall inspect, and document the excavations daily prior to entry by workers. The competent person must evaluate all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly.

3.6.1 Utility Locations

Prior to digging, the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained throughout the contract.

3.6.2 Utility Location Verification

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Digging within .061 m (2 feet) of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.6.3 Utilities with Concrete Slabs

Utilities located within concrete slabs or pier decks, bridges, and the like are extremely difficult to identify. The location must be coordinated with station utility departments in addition to a private locating service. Outages on system utilities shall be used in circumstances where concrete chipping, saw cutting, or core drilling is required and utilities are unable to be completely identified.

3.6.4 Shoring Systems

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on site for review. Job-made shoring or shielding shall have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

3.6.5 Trenching Machinery

Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file at the project site.

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Station Utilities for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. Insulating blankets, hearing protection, and switching suits may be required, depending on the specific job and as delineated in the Contractor's AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70.

3.8 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 06.I of USACE EM 385-1-1 and OSHA 29 CFR 1910.146. Any potential for a hazard in the confined space requires a permit system to be used.

- a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.05 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.
- b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.
- c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m (5 feet) in depth. Conform to Sections 06.I.09, 06.I.10 and 06.I.11 of USACE EM 385-1-1.
- d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.
- e. Include training information for employees who will be involved as entrants and attendants for the work. Conform to Section 06.I.06 of USACE EM 385-1-1.
- f. Daily Entry Permit. Post the permit in a conspicuous place close to the confined space entrance.

3.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with OSHA regulations, such as 29 CFR 1910.94, and USACE EM 385-1-1, Appendix C. The Contractor shall develop and implement effective exposure control and elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.10 HOUSEKEEPING

3.10.1 Clean-Up

All debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

3.10.2 Dust control

In addition to the dust control measures required elsewhere in the contract documents, dry cutting of brick or masonry shall be prohibited. [The Contracting Officer, upon written request by the Contractor, may consider exceptions to this prohibition on a case-by-case basis.] Wet cutting must address control of water run off.

-- End of Section --

SECTION 02220

DEMOLITION
05/02

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 in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6 (1990) Safety Requirements for Demolition Operations

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

ARI Guideline K (1997) Containers for Recovered Fluorocarbon Refrigerants

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

40 CFR 61-SUBPART M National Emission Standard for Asbestos

40 CFR 82 Protection of Stratospheric Ozone; Refrigerant Recycling

49 CFR 173.301 Shipment of Compressed Gas Cylinders

U.S. DEFENSE LOGISTICS AGENCY (DLA)

DLA 4145.25 (June 2000) Storage and Handling of Liquefied and Compressed Gases and Their Full and Empty Cylinders

U.S. DEPARTMENT OF DEFENSE (DOD)

DOD 4000.25-1-M Requisitioning and Issue Procedures

MIL-STD-129 (Rev. N) Marking for Shipment and Storage

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the project site; do not allow accumulations. The work includes demolition and removal of resulting rubbish and debris. Rubbish and debris shall be removed from Government property daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections. In the interest of conservation, salvage shall be pursued to the maximum extent possible (in accordance with Section 01572 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT, if applicable); salvaged items and

materials shall be disposed of as specified.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated.

When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Work Plan; G, RE.

The procedures proposed for the accomplishment of the work.

SD-07 Certificates

Demolition plan; G, RE.

Notifications; G, RE.

Notification of Demolition and Renovation forms; G, RE.

Submit proposed salvage, demolition and removal procedures to the Contracting Officer for approval before work is started.

1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," safety requirements shall conform with ANSI A10.6. Comply with all Federal, State, and local highway/roadway regulations as well as any posted limits.

1.4.1 Notifications

Furnish timely notification of demolition projects to the Kansas Department of Health and Environment.

Complete and submit Notification of Demolition and Renovation forms to State authorities and Contracting Officer, postmarked or delivered at least ten working days prior to commencement of work, in accordance with 40 CFR 61-SUBPART M.

1.5 DUST CONTROL

Prevent the spread of dust and debris and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

1.6 PROTECTION

1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

1.6.2 Existing Work

Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work, and shall submit a work plan outlining the procedures proposed. The Contractor shall

take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government; any damaged items shall be repaired or replaced as approved by the Contracting Officer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal work. Repairs, reinforcement, or structural replacement must have Contracting Officer approval.

1.6.3 Trees

Trees within the project site which might be damaged during demolition, and which are indicated to be left in place, shall be protected by a 6 foot high fence. The fence shall be securely erected a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees whichever is the greater distance. Any tree designated to remain that is damaged during the work under this contract shall be replaced in kind or as approved by the Contracting Officer.

1.6.4 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the Contracting Officer. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.6.5 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris is prohibited.

1.8 Required Data

Demolition plan shall include procedures for coordination with other work in progress, a disconnection schedule of utility services, a detailed description of methods and equipment to be used for each operation and of the sequence of operations.

1.9 Environmental Protection

The work shall comply with the requirements of Section 1356A.

1.10 USE OF EXPLOSIVES

Use of explosives will not be permitted.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVED

3.1.1 Structures

Existing USDB Castle shall be removed to bottom of footings except as noted. Tunnels attached to the building shall be removed as shown in drawings.

Sheets 40, 47, 48, 49, 50, 51, 53, 54, 60, and 70 and other information drawings provided with the solicitation indicate the structures that exist below grade that must be removed under this contract. These sheets are typical of the existing conditions for these buildings and what the Contractor should expect to encounter and remove.

3.1.1.1 Existing Footings and Walls (Wing 3)

Portions of existing footings and walls at the end of Wing 3 shall be left in place to avoid damaging the adjacent tunnel and to avoid undercutting the road in that area. Rubble infill may be used to stabilize the wall.

3.1.1.2 Existing Footings and Walls (Wing 7)

Portions of existing footings and walls at the end of Wing 7 shall be left in place as required to avoid damaging adjacent wall.

3.1.2 Utilities and Related Equipment

Remove existing utilities, as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer. If utility lines are encountered that are not shown on drawings, contact the Contracting Officer for further instructions. Poles and wire outside the castle are to be removed. Care shall be taken in disconnecting wires from buildings, which is not to be demolished.

3.1.3 Air Conditioning Equipment

Remove air conditioning equipment without releasing chlorofluorocarbon refrigerants to the atmosphere in accordance with the Clean Air Act Amendment of 1990. Recover all refrigerants prior to removing air conditioning equipment and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.4 Cylinders and Canisters

Remove all fire suppression system cylinders and canisters and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.4.1 Fixtures

The Contractor shall remove fluorescent fixtures including ballasts and bulbs, and place them in a location defined by the DIS prior to building demolition.

3.1.4.2 Traps

The Contractor is to remove grease from all grease traps serving the building prior to demolition.

3.2 DISPOSITION OF MATERIAL

3.2.1 Title to Materials

Except where specified in other sections, all materials and equipment removed shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.2.2 Salvaged Materials and Equipment

Material salvaged for the Contractor shall be stored as approved by the Contracting Officer and shall be removed from Government property before completion of the contract. Material salvaged for the Contractor shall not be sold on the site.

Historical items shall be removed in a manner to prevent damage. The following historical items shall be delivered to the Government for disposition: Corner stones, contents of corner stones, and document boxes wherever located on the site.

3.2.3 Disposal of Ozone Depleting Substance (ODS)

Class I and Class II ODS are defined in Section, 602(a) and (b), of The Clean Air Act. Prevent discharge of Class I and Class II ODS to the atmosphere. Place recovered ODS in cylinders meeting ARI Guideline K suitable for the type ODS (filled to no more than 80 percent capacity) and provide appropriate labeling. Recovered ODS shall be removed from Government property and disposed of in accordance with 40 CFR 82. Products, equipment and appliances containing ODS in a sealed, self-contained system (e.g. residential refrigerators and window air conditioners) shall be disposed of in accordance with 40 CFR 82.

3.2.3.1 Special Instructions

Each container shall have in it no more than one type of ODS. A warning/hazardous label shall be applied to the containers in accordance with Department of Transportation regulations. All cylinders including but not limited to fire extinguishers, spheres, or canisters containing an ODS shall have a tag with the following information:

- a. Activity name and unit identification code
- b. Activity point of contact and phone number
- c. Type of ODS and pounds of ODS contained
- d. Date of shipment

3.2.3.2 Fire Suppression Containers

Fire suppression system cylinders and canisters with electrical charges or initiators shall be deactivated prior to shipment. Also, safety caps shall be used to cover exposed actuation mechanisms and discharge ports on these special cylinders.

3.2.4 Transportation Guidance

Shipment of all ODS containers shall be in accordance with MIL-STD-129, DLA 4145.25 (also referenced one of the following: Army Regulation 700-68, Naval Supply Instruction 4440.128C, Marine Corps Order 10330.2C, and Air Force Regulation 67-12), 49 CFR 173.301, and DOD 4000.25-1-M.

3.3 CLEANUP

Debris and rubbish shall be removed from basement and similar excavations. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

3.3.1 Debris and Rubbish

Debris and rubbish shall be removed from basement and similar excavations. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply. There is no construction debris landfill at Fort Leavenworth. The Contractor must remove all construction debris from the installation and deliver to a state-approved landfill of his choice.

3.4 ACCESS

Other buildings inside the walls of the USDB complex are fully operational and will remain so during all phases of construction. Government employees and delivery vehicles will be using this road daily. There is only one road to gain entry or exit to the USDB prison compound. Traffic for the Contractor and Government employees must use the same road to access these areas. The Contractor shall not impede or interfere with Government vehicular traffic into and out of the USDB prison compound. The road/drive located west of and directly adjacent to buildings 477 and 478 must remain accessible for Government and delivery vehicles at all times during the execution of this project.

All access routes to and from the site shall be coordinated with the Contracting Officer. A temporary road shall be the responsibility of the demolition contractor.

-- End of Section --

SECTION 02233

CLEARING FOR CIVIL WORKS
07/02

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Structures

The term "structures" shall include buildings or portions thereof, walls, etc. Structures shall be removed or filled to the ground surface.

1.2 PROJECT/SITE CONDITIONS

1.2.1 Aesthetics and Pollution Control

1.2.1.1 Ground Areas

All ground areas in the zone of normal pool level fluctuations which are disturbed by clearing operations and which would become subject to erosion will be protected or restored.

1.2.1.2 Construction Roads

All construction roads proposed for use by the Contractor for removing demolition debris or for access to the work area shall be approved, as to location and alignment, prior to construction. Where such roads are determined to be of no value to project operation or will not serve recreational access needs after project construction, the areas occupied by these roads will be restored by grading and seeding or sodding.

1.2.2 Existing Conditions

1.2.2.1 Boundaries

The area to be cleared under this section is indicated on the drawings.

1.2.2.2 Fences

Not at any time, should the fence or portion of the fence around the compound be removed.

1.2.2.3 Structures

Where filling of structures is required, fill to within 18 inches of the ground surface shall be made with noncombustible materials such as masonry rubble, and other debris. When all available debris has been used in filling, all remaining unfilled portions, together with the above 18 inches shall be completely filled to the ground surface with earth, borrowed as directed by the Contracting Officer. The top surfaces of fills shall be neat in appearance and smooth enough not to constitute a hazard to persons or livestock. This reference is to infill structures at the west end of Wing 3. The Contractor will be allowed to leave an amount (to be determined in the field) of structure needed to prevent de-stabilization of the adjacent tunnel and road above. This is the only area where rubble or construction debris can be used as backfill. All other locations require 100% soil backfill. Castle rubble will not be allowed. New Kansas Department of Health and Environment regulations prohibit this practice because the site would then become a construction landfill. There is no source of borrow or fill available to the Contractor on the installation. The Contractor must

obtain all borrow from a source (of his choosing) from off the installation.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING REQUIREMENTS

3.2 DISPOSAL OF MATERIAL

3.2.1 General

The material cleared from the areas shall be completely removed by transporting from the Government property areas unless otherwise approved by the Contracting Officer. All salvageable steel and copper will become the property of the Contractor and in the interest of conservation it is required that the Contractor make a reasonable effort to dispose of material for these purposes. However, there is no guarantee of salvageable materials for quantity or quality. TEXT DELETED.

3.2.2 Removal from Site

Except as otherwise provided, the Contractor will be permitted to remove salvageable steel and copper from the site of the work. The Contractor will be allowed to stockpile salvaged material at approved locations. The Government will assume no responsibility for the protection and safekeeping of such material. All stockpiled salvageable material must be removed from Government lands before final acceptance of the work will be made.

3.3 MARKETABLE MATERIALS

Any of the cleared materials which the Contractor considers marketable shall become his property and shall be removed from the project site.

-- End of Section --

SECTION 02300A

EARTHWORK
12/97

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 in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO T 180	(1997) Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and an 457 mm (18-in) Drop
AASHTO T 224	(1996) Correction for Coarse Particles in the Soil Compaction Test

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 422	(1963; R 1998) Particle-Size Analysis of Soils
ASTM D 1140	(1997) Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve
ASTM D 1557	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu. m.))
ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 4318	(1998) Liquid Limit, Plastic Limit, and Plasticity Index of Soils

1.2 DEFINITIONS

1.2.1 Satisfactory Materials

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, SW, SP. Satisfactory materials for grading shall be comprised of stones less than 8 inches, except for fill material for pavements and railroads which shall be comprised of stones less than 3 inches in any dimension.

1.2.2 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; and material classified as satisfactory which contains root and other organic matter or frozen material. The Contracting Officer shall be notified of any contaminated materials.

1.2.3 Cohesionless and Cohesive Materials

Cohesionless materials include materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM will be identified as cohesionless only when the fines are nonplastic. Testing required for classifying materials shall be in accordance with ASTM D 4318, ASTM C 136, ASTM D 422, and ASTM D 1140.

1.2.4 Degree of Compaction

Degree of compaction required, except as noted in the second sentence, is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557 abbreviated as a percent of laboratory maximum density. Since ASTM D 1557 applies only to soils that have 30 percent or less by weight of their particles retained on the 3/4 inch sieve, the degree of compaction for material having more than 30 percent by weight of their particles retained on the 3/4 inch sieve shall be expressed as a percentage of the maximum density in accordance with AASHTO T 180 Method D and corrected with AASHTO T 224. To maintain the same percentage of coarse material, the "remove and replace" procedure as described in the NOTE 8 in Paragraph 7.2 of AASHTO T 180 shall be used.

1.3 CLASSIFICATION OF EXCAVATION

No consideration will be given to the nature of the materials, and all excavation will be designated as unclassified excavation.

1.4 BLASTING

Blasting will not be permitted.

1.5 UTILIZATION OF EXCAVATED MATERIALS

Unsatisfactory materials removed from excavations shall be disposed of off the installation. Satisfactory material removed from excavations may be used, insofar as practicable, in the construction of fills, subgrades, bedding (as backfill), and for similar purposes. There are no designated waste or spoils areas at Fort Leavenworth. The Contractor must remove all waste and spoil from the installation.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL EXCAVATION

The Contractor shall perform excavation of every type of material encountered within the limits of the project to the lines, grades, and elevations indicated and as specified. Grading shall be in conformity with the typical sections shown. Satisfactory excavated materials may be transported to and placed in fill within the limits of the work. Unsatisfactory materials encountered within the limits of the work shall be excavated below grade and replaced with satisfactory materials as directed. Such excavated material and the satisfactory material ordered as replacement shall be included in excavation. Surplus satisfactory excavated material not required for fill or embankment shall be removed from the installation. Unsatisfactory excavated material shall also be removed from the installation. TEXT DELETED.

3.2 SELECTION OF BORROW MATERIAL

Borrow material shall be selected to meet the requirements and conditions of the particular fill or embankment for which it is to be used. Borrow material shall

be obtained from the borrow areas selected by the Contractor. TEXT DELETED. No borrow shall be obtained within the limits of the project site without prior written approval. There is no source of borrow or fill available to the Contractor on the installation. The Contractor must obtain all borrow from a source (of his choosing) from off the installation.

3.3 GRADING AREAS

Where indicated, work will be divided into grading areas within which satisfactory excavated material shall be placed in embankments, fills, and required backfills. The Contractor shall not haul satisfactory material excavated in one grading area to another grading area except when so directed in writing.

3.4 BACKFILL

Backfill adjacent to any and all types of structures shall be placed and compacted to at least 90 percent laboratory maximum density for cohesive materials or 95 percent laboratory maximum density for cohesionless materials to prevent wedging action or eccentric loading upon or against the structure. Compaction requirements for backfill materials shall conform to the applicable portions of paragraph SUBGRADE PREPARATION, and Section 02630 STORM-DRAINAGE SYSTEM; and Section 02316 EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES SYSTEMS. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

3.5 SUBGRADE PREPARATION

3.5.1 Construction

Subgrade shall be shaped to line, grade, and cross section, and compacted as specified. This operation shall include plowing, disking, and any moistening or aerating required to obtain specified compaction. Soft or otherwise unsatisfactory material shall be removed and replaced with satisfactory excavated material or other approved material as directed. Rock encountered in the cut section shall be excavated to a depth of 6 inches below finished grade for the subgrade. Low areas resulting from removal of unsatisfactory material or excavation of rock shall be brought up to required grade with satisfactory materials, and the entire subgrade shall be shaped to line, grade, and cross section and compacted as specified. The elevation of the finish subgrade shall not vary more than 0.05 foot from the established grade and cross section.

3.5.2 Compaction

Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment. Except for paved areas, each layer of the embankment shall be compacted to at least 85 percent of laboratory maximum density.

3.5.2.1 Subgrade for Pavements

Subgrade for pavements shall be compacted to at least 95 percentage laboratory maximum density for the depth below the surface of the pavement shown. When more than one soil classification is present in the subgrade, the top 6 inches of subgrade shall be scarified, windrowed, thoroughly blended, reshaped, and compacted.

3.6 FINISHING

The surface of excavations, embankments, and subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown. The degree of finish for graded areas shall be within 0.1 foot of the grades and elevations indicated except that the degree of

finish for subgrades shall be specified in paragraph SUBGRADE PREPARATION. Gutters and ditches shall be finished in a manner that will result in effective drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials.

3.7 PLACING TOPSOIL

On areas to receive topsoil, the compacted subgrade soil shall be scarified to a 2 inch depth for bonding of topsoil with subsoil. Topsoil then shall be spread evenly and graded to the elevations and slopes shown. Topsoil shall not be spread when frozen or excessively wet or dry. Material required for topsoil in excess of that produced by excavation within the grading limits shall be obtained from areas indicated.

3.8 SUBGRADE PROTECTION

During construction, excavations shall be kept shaped and drained. Ditches and drains along subgrade shall be maintained to drain effectively at all times. The finished subgrade shall not be disturbed by traffic or other operation and shall be protected and maintained by the Contractor in a satisfactory condition until subbase, base, or pavement is placed. The storage or stockpiling of materials on the finished subgrade will not be permitted. No subbase, base course, or pavement shall be laid until the subgrade has been checked and approved, and in no case shall subbase, base, surfacing, or pavement be placed on a muddy, spongy, or frozen subgrade.

-- End of Section --

SECTION 13281A

LEAD HAZARD CONTROL ACTIVITIES
03/02

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 in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 1741 (2000) Preparation of Airborne Particulate Lead Samples Collected During Abatement and Construction Activities for Subsequent Analysis by Atomic Spectrometry

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 701 (1999) Methods of Fire Tests for Flame-Resistant Textiles and Films

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 84-100 (1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD 6780 (1995; Errata Aug 1996; Rev Ch. 7 - 1997) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

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

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1926 Safety and Health Regulations for Construction

40 CFR 745 Lead-Based Paint Poisoning Prevention in Certain Residential Structures

1.2 DEFINITIONS

- a. Lead Hazard Control Activity - Any construction work where a worker may be occupationally exposed to lead and procedures have to be followed to assure that: 1). Lead inside the lead hazard control area is cleaned up to appropriate levels and 2). Lead dust does not disperse outside the lead hazard control area at unacceptable levels.
- b. Public/Commercial Building - Buildings on real property, including residential real property, generally accessible to the public except

target housing, child occupied facilities and industrial buildings. Examples include offices, stores/shopping centers, churches, schools, barracks, hospitals, museums, airports, hotels, convention centers.

- c. Industrial Building - Any building used for industrial purposes where normal operations inside the building may produce lead aerosol that will settle out on inside surfaces.
- d. Target Housing - Residential real property which is housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any one or more children age 6 years or under resides or is expected to reside in such housing for the elderly or persons with disabilities) or any 0 bedroom dwelling.
- e. Child-occupied Facility - Real property which is a building or portion of a building constructed prior to 1978 visited regularly by the same child, 6 years of age or under, on at least two different days, provided that each day's visit lasts at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities include but are not limited to, day-care centers, preschools and kindergarten classrooms.
- f. Residential Real Property - Real property on which there is situated one or more residential dwellings used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons.

1.3 DESCRIPTION OF WORK

The work covered by this section includes the precautions specified in this section for the protection of workers and the environments.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Materials and Equipment.
Expendable Supplies.

A description of the materials, equipment and expendable supplies required; including Material Safety Data Sheets (MSDSs) for material brought onsite to perform the work.

Qualifications; G, RE.

A report providing evidence of qualifications and designating responsibilities for personnel and laboratories.

SD-06 Test Reports

Accident Prevention Plan (APP); G, RE.

A report describing how the Contractor will protect workers, building occupants, and building contents while performing lead hazard control activities; and how project clearance will be performed.

Sampling and Analysis; G, RE.

A log of the analytical results required for the sampling. The log shall be kept current.

1.5 QUALIFICATIONS

1.5.1 Qualifications and Organization Report

The Contractor shall furnish a qualification and organization report. The report shall describe the qualifications of the qualified safety and health professional (QSHP), onsite safety and health supervisor (OSHS), and labor staff. The report shall include an organization chart showing the Contractor's personnel by name and title and project specific responsibilities and authorities. The report shall describe the qualifications of the laboratories selected for this project. The report shall be signed by the Contractor and the qualified safety and health professional to indicate that all personnel and laboratories comply with certification and experience requirements of this section and that project personnel have been given the authority to complete the tasks assigned to them.

1.5.2 Personnel and Subcontractor Responsibilities and Qualifications

1.5.2.1 Qualified Safety and Health Professional (QSHP)

The QSHP shall be responsible for development of project specific requirements in the Accident Prevention Plan (APP); supervise implementation of the APP requirements; visit the site as needed to verify effectiveness of the APP and to coordinate resolution of unknown situations that may develop as the work progresses; be available to provide consultation to the Onsite Safety and Health Supervisor (OSHS); review sampling and analytical results to evaluate occupational exposure levels, and verify effectiveness of controls. The QSHP shall have demonstrable experience with the implementation of occupational safety and health regulations.

1.5.2.2 Testing Laboratories

The laboratory selected to perform analysis on paint chip, soil or dust wipe samples shall be accredited by EPA's National Lead Laboratory Accreditation Program (NLLAP). The laboratory selected perform analysis on worker exposure (industrial hygiene) samples shall be in the American Industrial Hygiene Association's Industrial Hygiene Laboratory Accreditation Program (IHLAP) and shall be successfully participating in the Proficiency Analytical Testing (PAT) program for lead.

1.5.2.3 Blood Lead Testing

The laboratory selected to perform analysis on worker blood samples shall be approved by OSHA and meet the requirements contained in http://www.osha-slc.gov/OCIS/toc_bloodlead.html.

1.5.2.4 Disposal Facility and Transporter

The Contractor shall furnish written evidence that the landfill to be used for lead hazard waste disposal is approved for lead disposal by state and local requirements. Copies of any required signed agreements between the Contractor (including subcontractors and transporters) and the lead disposal facility shall be provided. Steel can be recycled with the paint intact. The Contractor must get a certificate of reclamation from the recycler. Masonry and other construction debris can be disposed of off site in a licensed demolition/construction landfill if it passes the TCLP test. It is the responsibility of the Contractor to coordinate this with the landfill he chooses and do the testing. The Contractor must notify the landfill that the materials he is delivering contain LBP. Given the volume of debris, at this time the Government has no reason to believe it will not pass the TCLP test.

1.6 REGULATORY REQUIREMENTS

In addition to the detailed requirements of this specification, work shall be performed in accordance with requirements of EM 385-1-1 and applicable regulations including, but not limited to 29 CFR 1910, 29 CFR 1926, especially Section .62, and the accepted Accident Prevention Plan with Appendices.

1.7 ACCIDENT PREVENTION PLAN (APP)

1.7.1 APP Content and Organization

The Contractor's Accident Prevention Plan shall be organized into 5 parts, consisting of the overall plan and 4 appendices. The overall plan shall address each element in Appendix A of EM 385-1-1 in project specific detail. The elements are: a. Signature Sheet, b. Background Information, c. Statement of Safety and Health Policy, d. Responsibilities and Lines of Authorities, e. Subcontractors and Suppliers, f. Training, g. Safety and Health Inspections, h. Safety and Health Expectations, Incentive Programs and Compliance, i. Accident Reporting, j. Medical Support, k. Corporate Plans and Programs required by this contract, (HAZCOM, Respiratory Protection).

1.7.1.1 Lead Hazard Control Plan Appendix

The Lead Hazard Control Appendix shall address occupational exposure issues and shall describe the procedures to be followed to protect employees from lead hazards while performing demolition activities. Each of the following elements shall be addressed in the lead hazard control appendix:

- a. The location and a brief description of each work activity that may emit lead into the workplace atmosphere. A description of any components containing lead shall be included and keyed to the project drawings.
- b. Description of equipment and materials, controls, crew size, worker responsibilities, and operating and maintenance procedures.
- d. Description of the specific lead control methods and procedures to protect workers and other onsite contractors from lead exposure.
- e. Technologic equipment used to keep occupational exposure below the Permissible Exposure Limit and minimize worker exposure to lead (i.e., HEPA-filtered vacuum equipment/cleaners, special negative air enclosure equipment and supplies, etc.).
- f. Worker Exposure Assessment including methods and procedures to monitor and document worker exposure to lead. Worker exposure monitoring shall be broken into two parts in the plan. Part A: Initial Determination. The Contractor shall describe worker monitoring (if performed for the "initial determination" described in 29 CFR 1926 (.62) (d). Monitoring for the initial determination may be omitted from the plan if the Contractor has sufficient proof from previous operations as specified in 29 CFR 1926 (.62) (d)(3)(iii) and (iv) that workers will not be exposed over the action level. The Contractor shall substitute objective proof of action level compliance in Part A if "initial determination" monitoring is omitted. Part B: Continued Exposure Monitoring. Worker exposure monitoring after the initial lead exposure determination has been made.
- g. Work Practices Program describing the protective clothing to be used to protect workers from lead exposure, house keeping procedures employed to minimize spread of lead contamination, hygiene facilities and practices used to prevent workers from inadvertent ingestion of lead.
- h. Administrative Control Procedures, to be used as a last resort, to limit

worker exposure to lead. The worker rotation schedule to be employed, should engineering or personal protective equipment precautions fail to be effective, shall be described. This element of the plan shall be omitted if administrative controls will not be used.

- i. Medical Surveillance practices and procedures used to monitor worker exposure to lead and to assure fitness for wearing respiratory protection devices.
- j. Worker training meeting the requirements of 29 CFR 1926 Sections (.62) and (.59) to assure workers understand hazard associated with working with lead and how to protect themselves.
- k. Security: Fenced and locked security area for the work area.

1.7.1.2 Activity Hazard Analyses Appendix

An Activity Hazard Analysis (AHA) shall be prepared for each work task data element specified on the individual work task data element sheets at the end of this section. The AHA shall be submitted to the Contracting Officer prior to beginning specified work. Format shall be in accordance with EM 385-1-1, figure 1-1. The AHA shall be continuously reviewed and modified, when appropriate, to address changing conditions or operations. Each accepted AHA shall be appended to and become part of the APP.

1.8 PRE-CONSTRUCTION SAFETY CONFERENCE

1.8.1 Conference General Requirements

The Contractor and the QSHP shall attend a pre-construction safety conference prior to starting work. Items required to be submitted shall be reviewed for completeness, and where specified, for acceptance. Details of the APP shall be revised to correct any deficiencies, and resubmitted for acceptance. Onsite work shall not begin until the APP has been accepted, unless otherwise authorized by the Contracting Officer. One copy of the APP shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to personnel on the site. As work proceeds, the APP shall be adapted to new situations and conditions. Changes to the APP shall be made by the QSHP with acceptance by the Contracting Officer. Should an unforeseen hazard become evident during performance of the work, the QSHP shall inform the Contracting Officer, both verbally and in writing, for immediate resolution. In the interim, the QSHP shall take necessary action to re-establish and maintain safe working conditions; and to safeguard onsite personnel, visitors, the public, and the environment. Disregard for provisions of this specification, or the accepted APP, shall be cause for stopping of work until the matter is rectified.

1.8.2 Preparatory Inspection Meeting

The Contractor shall arrange and hold a preparatory inspection meeting to review completeness and adequacy of the APP immediately prior to beginning each phase of work.

1.9 MEDICAL SURVEILLANCE REQUIREMENTS

The Contractor shall comply with the following medical surveillance requirements:

- a. The Contractor shall make every attempt to keep occupational exposure to lead on this project below the action level of 30 micrograms/cubic meter defined in 29 CFR 1926 (.62). If it is not possible, and if occupational exposures could possibly exceed the action level for 30 or more days per year, the Contractor shall institute a medical surveillance program. The program shall meet the examination frequency and content requirements specified in paragraph (j)(1), (j)(2) and (j)(3) of 29 CFR

1926 (.62). Medical removal as specified in paragraph (k) of 29 CFR 1926 (.62), if necessary, shall be at the Contractor's expense.

- b. Medical surveillance and biological monitoring shall be in compliance with 29 CFR 1926 (.62) (g) and (j). Initial biological monitoring shall be performed on lead hazard control workers prior to assignment to the project. Workers shall not be assigned to the project if results indicate a need for restricted activities.
- c. All lead hazard control workers shall pass the medical examinations necessary to be approved by the occupational physician to wear respiratory protection on this project. Occupational physician's approval shall be given prior to assignment to the project.

1.10 RESPIRATORY PROTECTION PROGRAM

The Contractor shall have a written respiratory protection program and shall be fully capable of implementing the requirement of the respiratory protection program on this project. The respiratory protection program shall meet the requirements of 29 CFR 1926 (.62) and 29 CFR 1910 (.134). Project specific respiratory protection requirements shall be included in the lead hazard control plan appendix of the Contractor's accident prevention plan.

1.11 TRAINING

1.11.1 OSHA Training Requirements

All Contractor personnel and/or subcontractors performing or responsible for onsite oversight of demolition activities shall meet the following training requirements.

- a. Content of 29 CFR 1926 (.62) and its appendices.
- b. How operations could result in exposure over the action level.
- c. Purpose, selection, fitting, use and limitations of respirators.
- d. Purpose and description of the medical surveillance program.
- e. Use of engineering controls and good work practices to limit occupational exposure to lead.
- f. Implementation of the lead hazard control plan appendix of the accident prevention plan.
- g. Medical supervision for the use of chelating agents.
- h. Employee right of access to medical surveillance records as specified in 29 CFR 1910 (.20).

1.11.2 Qualified Safety and Health Professional

The qualified safety and health professional shall meet the training requirements in paragraph 1.12.1 and shall meet the training, experience and authority requirements in 29 CFR 1926 (.62) to be a competent person and be trained and have the experience and education to meet 40 CFR 745 Subpart L requirements to carry the following certifications:

- a. Certified Risk Assessor
- b. Certified Project Designer
- c. Certified Supervisor

1.12 SAMPLING AND ANALYSIS

1.12.1 Sampling and Analytical Procedures

1.12.1.1 Sampling and Analysis Methods

Analysis shall conform to NIOSH 84-100 Method 7082, Lead, for personal sampling required by 29 CFR 1926 (.62) Sampling shall conform to ASTM E 1741.

1.12.2 Occupational Exposure Assessment

Sampling and analytical procedures to determine compliance with the occupational exposure monitoring requirement of this section shall be described in the lead hazard control plan appendix of the Contractor's accident prevention plan. Monitoring for the initial determination may be omitted if the Contractor has sufficient proof from previous operations as specified in 29 CFR 1926 (.62) (d)(3)(iii) and (iv) that workers will not be exposed over the action level. The following occupational exposure monitoring requirements apply and shall be implemented if the requirements of 29 CFR 1926 (.62)(d)(3) (iii) and (iv) cannot be demonstrated.

- a. During Initial Monitoring the Contractor shall representatively sample employees with the greatest potential for exposure to aerosolized lead.
- b. Continued/Additional Monitoring shall meet applicable paragraphs in 29 CFR 1926 (.62)(d)(6), Frequency, after the initial determination has been made.

1.12.3 Lead Hazard Control Area/Containment Monitoring

The Contractor shall perform a visual inspection once per day outside the demolition work area to assure visual clearance criteria are maintained. The Contractor shall clean at its own expense, and to the Contracting Officer's satisfaction, all contaminated surfaces outside the demolition area, if surfaces fail visual clearance criteria.

1.12.4 Waste Disposal Sampling

DIS Environmental Division will take samples of waste generated by demolition for disposal characterization.

1.12.5 Analytical Results

The Contractor shall develop and maintain during the course of the project a log of analytical results generated by the above sampling requirements. The log shall clearly describe the reason for which the sample was taken (worker exposure, migration control, clearance) the analytical result for each sample and evaluate if the analytical result passed or failed the action levels. At a minimum, the Contractor shall include analytical results for samples required to be taken in paragraphs Occupational Exposure Assessment, Lead Hazard Control Area/Containment Monitoring, Occupancy During Work, and Clearance Monitoring specified above.

1.13 HYGIENE FACILITIES

The Contractor shall describe the personal hygiene facilities to be used by the workers in the Lead Hazard Control Plan Appendix of the Accident Prevention Plan. The Contractor shall provide hygiene facilities for lead hazard control workers. Hygiene facilities shall consist of the following:

1.13.1 Hand Wash Stations

The Contractor shall provide hand washing facilities for use by lead hazard control workers. Hand washing facilities shall comply with the requirements in

29 CFR 1926 (.51) (f). Faces and hands shall be washed when leaving the lead hazard control area and after each work-shift if showers are not provided.

1.13.2 Change Area

The Contractor shall provide a change area to workers. The change area shall be equipped so that contaminated work clothing and street clothes shall be stored separately to prevent cross contamination.

1.13.3 Showers

Showers shall be provided if feasible and if worker exposures exceed the PEL. When provided, showers facilities shall meet the requirements of 29 CFR 1926 (.51) (f).

1.13.4 Eating Area

The Contractor shall set aside an area or provide a room for taking breaks and eating lunch. This area shall be kept as free as practicable from lead contamination. Workers shall be required to follow the procedures in 29 CFR 1926 (.62) (i)(4) when using the room.

1.14 POSTED WARNINGS AND NOTICES

The following regulations, warnings, and notices shall be posted at the worksite in accordance with 29 CFR 1926 (.62).

1.14.1 Regulations

At least two copies of 29 CFR 1926 (.62) shall be made available for use by either the Contracting Officer or affected workers; and for the purpose of providing required information and training to the workers involved in the project. One copy shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to workers on the site.

1.14.2 Warning Signs and Labels

Warning signs shall be posted in each lead hazard control area where worker exposure to lead is undetermined or where the exposures are above the permissible exposure limit as defined in 29 CFR 1926 (.62). Signs shall be located to allow personnel to read the signs and take necessary precautions before entering the lead hazard control area.

1.14.2.1 Warning Signs

Warning signs shall be in English, be of sufficient size to be clearly legible, and display the following:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

1.14.2.2 Warning Labels

Warning labels shall be affixed to all lead waste disposal containers used to hold materials, debris and other products contaminated with lead hazards; warning labels shall be in English, and be of sufficient size to be clearly legible, and display the following:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY
BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN

ACCORDANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS.

1.14.3 Worker Information

Right-to-know notices shall be placed in clearly visible areas accessible to personnel on the site, to comply with Federal, state, and local regulations.

1.14.4 Air Monitoring Results

Air monitoring results shall be prepared so as to be easily understood by the workers. One copy shall be maintained in the Contractor's jobsite file, and a second copy shall be posted where it will be accessible to the workers as specified in 29 CFR 1926 (.62).

1.14.5 Emergency Telephone Numbers

A list of emergency telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Government and Contractor representatives who can be reached 24 hours per day, and professional consultants directly involved in the project.

1.15 MATERIALS AND EQUIPMENT

Sufficient quantities of health and safety materials required by 29 CFR 1926 (.62), and other materials and equipment needed to complete the project, shall be available and kept on the site.

1.15.1 Abrasive Removal Equipment

The use of powered machine for vibrating, sanding, grinding, or abrasive blasting is prohibited unless equipped with local exhaust ventilation systems equipped with high efficiency particulate air (HEPA) filters.

1.15.2 Vacuum Systems

Vacuum systems shall be suitably sized for the project, and filters shall be capable of trapping and retaining all mono-disperse particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. Used filters that are being replaced shall be disposed in a proper manner.

1.15.3 Heat Blower Guns

Heat blower guns shall be flameless, electrical, paint-softener type with controls to limit temperature to 1,100 degrees F. Heat blower shall be DI (non-grounded) 120 volts ac, and shall be equipped with cone, fan, glass protector and spoon reflector nozzles.

1.15.4 Chemical Paint Strippers

Chemical paint strippers shall not contain methylene chloride and shall be formulated to prevent stain, discoloration, or raising of the substrate materials.

1.15.5 Chemical Paint Stripper Neutralizer

Neutralizers for paint strippers shall be compatible with the substrate and suitable for use with the chemical stripper that has been applied to the surface.

1.15.6 Detergents and Cleaners

Detergents or cleaning agents used shall have demonstrated effectiveness in lead control work using cleaning techniques specified by HUD 6780 guidelines.

1.16 EXPENDABLE SUPPLIES

1.16.1 Polyethylene Bags

Disposable bags shall be polyethylene plastic and shall be a minimum of 6 mils thick (4 mils thick if double bags are used) or any other thick plastic material shown to demonstrate at least equivalent performance; and shall be capable of being made leak-tight. Leak-tight means that solids, liquids or dust cannot escape or spill out.

1.16.2 Polyethylene Leak-tight Wrapping

Wrapping used to wrap lead contaminated debris shall be polyethylene plastic that is a minimum of 6 mils thick or any other thick plastic material shown to demonstrate at least equivalent performance.

1.16.3 Polyethylene Sheeting

Sheeting shall be polyethylene plastic with a minimum thickness of 6 mil, or any other thick plastic material shown to demonstrate at least equivalent performance; and shall be provided in the largest sheet size reasonably accommodated by the project to minimize the number of seams. Where the project location constitutes an out of the ordinary potential for fire, or where unusual fire hazards cannot be eliminated, flame-resistant polyethylene sheets which conform to the requirements of NFPA 701 shall be provided.

1.16.4 Tape and Adhesive Spray

Tape and adhesive shall be capable of sealing joints between polyethylene sheets and for attachment of polyethylene sheets to adjacent surfaces. After dry application, tape or adhesive shall retain adhesion when exposed to wet conditions, including amended water. Tape shall be minimum 2 inches wide, industrial strength.

1.16.5 Containers

When used, hazardous waste containers shall be leak-tight and shall be labeled in accordance with EPA, DOT and OSHA standards, as specified in paragraph WARNING LABELS. Label containers to identify contents. Appropriate containers will be provided by the government.

1.16.6 Chemicals

Chemicals, including caustics and paint strippers, shall be properly labeled, used in accordance with the manufacturers recommendations and stored in leak-tight containers. Material Safety Data Sheets (MSDSs) shall be provided and hazard communication procedures implemented in conformance with paragraph HAZARD COMMUNICATION PROGRAM.

1.17 STORAGE OF MATERIALS

Materials shall be stored protected from damage and contamination. During periods of cold weather, plastic materials shall be protected from the cold. Flammable or hazardous materials shall not be stored inside a building. Materials shall be regularly inspected to identify damaged or deteriorating items. Damaged or deteriorated items shall not be used and shall be removed from the site as soon as they are discovered. Stored materials shall not present a hazard or an inconvenience to workers, visitors, and/or other occupants and employees of the facility in which they are located.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 WORK PROCEDURES

The Contractor shall perform work following practices and procedures described accident prevention plan.

3.1.1 Demolition Work Areas, Equipment and Procedures

The Contractor shall set up demolition work areas and operate equipment within the demolition work area in a manner that will minimize migration of lead dust beyond the demolition work area boundaries and minimize exposure to workers.

3.2 USE OF HYGIENE FACILITIES WHEN LEAD HAZARD CONTROL AREA ESTABLISHED

- a. Personnel and equipment shall be decontaminated when exiting the lead hazard control area. The Contractor shall comply with the following personnel and equipment decontamination procedures:
 - (1) HEPA vacuum outer garments and equipment.
 - (2) Wet Wipe Equipment.
 - (3) Remove outer layer of garments.
 - (4) Thoroughly wash face and hands, if showering not required.
 - (5) Shower (if applicable).
 - (6) Remove Respirator (if applicable).
 - (7) Exit lead hazard control area.
- b. The Contractor shall provide, and workers shall use, a change room to change into work clothing at the beginning of a work shift. At the end of the work shift workers shall change back into street clothing and leave contaminated work clothing at the site for disposal or laundering.
- c. The Contractor shall provide an eating facility as free as practical from lead contamination. Workers shall be allowed usage of the eating facility for rest/lunch breaks.

3.3 WASTE DISPOSAL PROCEDURES

3.3.1 Construction Debris and/or Sanitary Landfill Waste

The Contractor shall dispose of the following waste streams in a construction debris landfill: Building Demolition Debris. Regular trash will be transported off site for proper disposal.

3.3.2 Waste Stream Classification

The Government shall determine the RCRA waste classification for all waste streams generated by the demolition project. DIS Environmental Division and the Contracting Officer will approve waste stream treatment and disposal requirements proposed by the Contractor.

3.3.3 RCRA Subtitle C Hazardous Waste

The Government shall dispose of the following waste streams at and approved RCRA subtitle C hazardous wastes landfill: Dust and paint chips from HEPA vacuuming operations, paint sludge and residue from chemical or heat stripping procedures.

3.3.4 Hazardous Waste Transportation and Disposal

The Contractor shall transfer hazardous wastes to DIS Environmental Division for proper disposal. All disposal costs shall be charged to the project.

3.3.5 Paint Removal Methods

Prohibited paint removal methods shall include: open flame burning or torching, including the use of heat guns having operating temperatures greater than 1,100 degrees F; machine sanding or grinding without HEPA exhaust; non-contained hydro blasting or high-pressure water wash; abrasive blasting or sandblasting without HEPA exhaust; dry scraping, except near electrical outlets or when using a heat gun. Chemical paint removers containing methylene chloride are prohibited. Building components and structures adjacent to the removal process shall be appropriately protected from damage due to the removal process employed. Stripping shall be done according to manufacturer's recommendations. Stripped substrates shall be thoroughly washed and neutralized before applying a primer or sealing coat.

3.3.6 Low Temperature Heat Gun

Prior to beginning work, electrical fuses and adequate electrical supply shall be verified. Only fuses properly sized for the service, and otherwise permitted by code, shall be used. Properly sized fuses shall not be changed out with larger fuses to increase amperage beyond safe limits. Portable electric generators may be used to safely supply adequate amperage. An accessible garden hose with a pressure-release spray nozzle; a crowbar to remove smoldering wood; and a long-handled sledgehammer to open up walls exposed to smoldering insulation shall be readily available. A fully charged ABC-type (20 pound minimum) fire extinguisher shall be available within 100 feet of the work area. Adequate ventilation shall be provided for the work area. Worker protection shall include respirators equipped with combination HEPA filter/organic vapor cartridges. The Contractor shall equip heat guns with extension tubes or wire mesh as needed to prevent premature burnout of the heating elements and to minimize paint film scorching or smoking. Optimal heat gun/substrate separation is typically 3 to 6 inches.

3.3.7 HEPA Sanding

The HEPA vacuum shall be correctly sized to provide adequate airflow, permitting the system to operate properly. If longer exhaust hoses are used, a larger HEPA vacuum shall be provided to handle the extra pressure drop in the vacuum hose. The HEPA filter shall be operated in accordance with manufacturer's instructions. Worker protection shall include respirators or filtering facepieces equipped with HEPA filters.

3.3.8 Wet Scraping

Surfaces near electrical outlets shall not be moistened but shall be dry scraped only. Loose material shall be scraped from the surface and deposited onto the containment plastic. Damp scrapings shall be cleaned up as soon as possible to prevent tracking throughout the work area. Scraper blades shall be kept sharp. Additional scraper blades shall be supplied and shall be selected for the type of surface being scraped.

3.3.9 HEPA Vacuum Needle Gun

The vacuum needle gun head shall be equipped with a vacuum shroud designed for the surface to be treated. The needle gun shall be operated to maximize surface contact of the vacuum shroud. Work shall be positioned to minimize the degree workers must reach above shoulder level, in order to minimize worker fatigue and loss of needle gun contact with the surface.

3.3.10 Onsite Paint Removal

Paint remover shall be applied in accordance with the manufacturer's instructions. Outdoor application shall only be performed in weather conditions recommended by the manufacturer. The work area surrounding the application process shall be secured to prevent access by children and unauthorized personnel. Workers shall be provided with the appropriate personal protective

clothing and equipment in accordance with manufacturer's recommendations and good industrial hygiene practice. A portable eyewash shall be provided whenever eye irritant strippers are used. An abundant source of running water shall be provided in the work area. The stripper shall be tested in a small area prior to full scale stripping. Caustic strippers shall not be used on aluminum or glass surfaces. Waste disposal shall be in accordance with paragraph WASTE DISPOSAL PROCEDURES. Stripped surfaces shall be neutralized and washed in accordance with manufacturer's instructions and paragraph CHEMICAL PAINT STRIPPER NEUTRALIZER.

3.4 CLEARANCE PROCEDURES

3.4.1 Visual Inspection

QSHP shall perform a visual inspection, using the form at the end of this section, for each lead hazard control area to assure that lead hazard control activities, identified in the individual work task data elements, have been properly completed. The QSHP shall visually verify that lead hazards have been removed, control technology has been appropriately applied/installed and that the lead hazard control area is free of dust and paint chips generated by lead hazard control activities.

3.5 EVALUATION OF SAMPLING AND MONITORING RESULTS

Analytical results from samples taken during lead hazard control activities shall be evaluated to determine compliance with occupational safety and health standards and project specific control efficiency and clearance/clean up levels.

3.5.1 Occupational Safety and Health

The QSHP shall review the analytical results from samples taken for the initial exposure assessment and continued occupational safety and health monitoring if required. Effectiveness and adequacy of personal protective equipment, respirators, work practices, hygiene facilities and personal decontamination procedures shall be evaluated and upgrades/downgrades in equipment and procedures made. After notifying the Contracting Officer the following shall be applied:

- a. Exposures over the PEL (0.05 mg/cubic meter):
 - (1) Improve work practices to reduce exposures.
 - (2) Don respirators.
 - (3) Assure eating facilities and change rooms are clean and are free from settled dust.
 - (4) Shower as part of personal decontamination.
- b. Exposures over the Action Level (0.03 mg/cubic meter):
 - (1) Assure exposed individuals enrolled in the medical surveillance program.
 - (2) Assure exposed individuals enrolled in and up to date with lead exposure training requirements.

3.5.2 Control Efficiency of Containment Features

The QSHP shall review and document results of the visual inspection determining visual clearance criteria are being met while demolition activities are being performed. The QSHP shall review analytical results from samples taken to determine if lead is migrating outside work areas at levels in excess of clearance criteria. The QSHP shall notify the Contracting Officer and apply the following actions if results exceed project specific clearance levels outside the

work area:

- a. Require/improve containment.
- b. Improve work practices to reduce lead aerosol generation.

3.5.3 Clearance

The QSHP shall review analytical results for the samples taken to determine compliance with project specific clearance requirements. The following actions apply and shall be performed at the Contractor's expense if project specific clearance levels are exceeded:

Reclean surfaces.

3.6 CLEARANCE REPORT

The QSHP shall prepare a clearance report including the following information:

- a. Start and completion dates of lead hazard control activities.
- e. The name, address and signature of the QSHP or independent risk assessor to indicate clearance requirements have been met.
- f. Certification of each Visual Inspection performed by the QSHP.
- g. Only if necessary: Analytical results from clearance sampling performed by the QSHP or independent risk assessor, the name of the laboratory that conducted the analysis. Results shall be provided in both the laboratory report and on the appropriate example forms provided at the end of this section.
- i. Documentation of hazardous waste turned in to the Government.

3.7 TITLE TO MATERIALS

Materials resulting from demolition work, except as specified otherwise, shall be come the property of the Contractor, and shall be disposed of in accordance with Section 02220A DEMOLITION, except as specified.

3.8 CONTRACTOR DISPOSAL OF HAZARDOUS WASTE

Disposal of hazardous waste is through the Government. The Contractor shall not dispose of any hazardous waste generated on site.

-- End of Section --

1. The Invitation Number in the header of each page is corrected to read "W912DQ-04-R-0004-0004".
2. Section 13281A, paragraph titled "CONTRACTOR DISPOSAL OF HAZARDOUS WASTE" is deleted in its entirety.