SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES
1.2 ORDERING INFORMATION

-- End of Section Table of Contents --

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the sponsoring organization, e.g. UL 1 (1993; Rev thru Jan 1995) Flexible Metal Conduit. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for convenience, e.g. UL's unnumbered 1995 edition of their Building Materials Directory is identified as UL-01 (1995) Building Materials Directory. The sponsoring organization number (UL 1) can be distinguished from an assigned identifying number (UL-01) by the lack of a dash mark (-) in the sponsoring organization assigned number.

1.2 ORDERING INFORMATION

The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

ACI INTERNATIONAL (ACI)

P.O. Box 9094
Farmington Hills, MI 48333-9094
Ph: 248-848-3700
Fax: 248-848-3801
Internet: http://www.aci-int.org

ACOUSTICAL SOCIETY OF AMERICA (ASA)

500 Sunnyside Blvd.
Woodbury, NY 11797
Ph: 516-576-2360
Fax: 516-576-2377
email: asa@aip.org
Internet: http://asa.aip.org

AGRICULTURAL MARKETING SERVICE (AMS)

Seed Regulatory and Testing Branch
USDA, AMS, LS Div.
Room 209, Bldg. 306, BARC-East
Beltsville, MD 20705-2325
Ph: 301-504-9430
Fax: 301-504-5454 Internet: http://www.ams.usda.gov/lsg/ls-sd.htm
e-mail: james_p_triplitt@usda.gov

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

4301 North Fairfax Dr., Suite 425
ATTN: Pubs Dept.
Arlington, VA 22203
Ph: 703-524-8800
Fax: 703-528-3816
E-mail: ari@ari.org
Internet: www.ari.org

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)

1712 New Hampshire Avenue, NW
Washington, DC 20009
Ph: 202-483-9370
FAX: 202-234-4721

AIR DIFFUSION COUNCIL (ADC)

104 So. Michigan Ave., No. 1500
Chicago, IL 60603
Ph: 312-201-0101
Fax: 312-201-0214

AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)

30 W. University Dr.
Arlington Heights, IL 60004-1893
Ph: 708-394-0404
Fax: 708-253-0088

ALUMINUM ASSOCIATION (AA)

Pubs Department
P.O. Box 753
Waldorf, MD 20601
Ph: 301-645-0756
Fax: 301-843-0159
Internet: www.aluminum.org

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

1827 Walden Ofc. Sq.
Suite 104
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
Internet: www.aamanet.org

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 800-231-3475 202-624-5800
Fax: 800-525-5562 202-624-5806
Internet: www.aashto.org
NOTE: AASHTO documents with numbers beginning with M or T are

available only in Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 1998 @$289.00\X

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

P.O. Box 12215
1 Davis Drive
Research Triangle Park, NC 27709-2215
Ph: 919-549-8141
Fax: 919-549-8933

AMERICAN BEARING MANUFACTURERS ASSOCIATION (AFBMA)

1200 19th Street, NW, Suite 300
Washington, DC 20036-4303
Ph: 202-429-5155
Fax: (202-828-6042)

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)

1200 19th Street, NW, Suite 300,Washington, DC 20036
Ph: 202-429-5155 Fax: 202-828-6042

AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)

222 West Las Colinas Blvd., Suite 641
Irving, TX 75039-5423
Ph: 972-506-7616
Fax: 972-506-7682
Internet: http://www.concrete-pipe.org
e-mail: info@concrete-pipe.org

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

1330 Kemper Meadow Dr.
Cincinnati, OH 45240-1634
Ph: 513-742-2020
Fax: 513-742-3355
Internet: www.acgih.org
E-mail: pubs@acgih.org

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)

American Wood Council
ATTN: Publications Dept.
1111 Nineteenth St. NW, Suite 800
Washington, DC 20036
Ph: 800-294-2372
Fax: 202-463-2791
Internet: http://www.afandpa.org
Order From: American Wood Council
P.O. Box 5364
Madison, WI 53705-5364
Ph: 800-890-7732
Fax: 608-231-2152

AMERICAN GAS ASSOCIATION (AGA)

Order from: AGA Distribution Center

P.O. Box 79230
Baltimore, MD 21279-0230
Ph: 301-617-7819
Fax: 301-206-9789

AMERICAN GAL ASSOCIATION BABORATORIES (AGAL)

Address
Ph:
Fax:
Internet:

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)

1500 King St., Suite 201
Alexandria, VA 22314-2730
Ph: 703-684-0211
Fax: 703-684-0242

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

One East Wacker Dr., Suite 3100
Chicago, IL 60601-2001
Ph: 312-670-2400
Publications: 800-644-2400
Fax: 312-670-5403
Internet: http://www.aiscweb.com

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)

7012 So. Revere Parkway, Suite 140
Englewood, CO 80112
Ph: 303-792-9559
Fax: 303-792-0669

AMERICAN IRON AND STEEL INSTITUTE (AISI)

ATTN: Publication Orders
P.O. Box 4321
Chestertown, MD 21690
Ph: 800-277-3850
Fax: 410-810-0910

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

11 West 42nd St
New York, NY 10036
Ph: 212-642-4900
Fax: 212-398-0023
Internet: www.ansi.org/
Note: Documents beginning with the letter "S" can be ordered from:
Acoustical Society of America
P. O. Box 1020
Sweickley, PA 15143-9998
Ph: 412-741-1979
Fax: 412-741-0609
Internet:

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)

1250 I St., NW, Suite 500
Washington, DC 20005
Ph: 202-789-2900 Ext 3010
FAX: 202-789-1893

AMERICAN PETROLEUM INSTITUTE (API)

1220 L St., NW
Washington, DC 20005
Ph: 202-682-8375
Fax: 202-962-4776
Internet: http://www.api.org

AMERICAN RAILWAY ENGINEERING & MAINTENANCE-OF-WAY ASSOCIATION (AREMA)

8201 Corporate Dr., Suite 1125
Landover, MD 20785
Ph: 301-459-3200
Fax: 301-459-8077

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

1711 Arlingate Lane
P.O. Box 28518
Columbus, OH 43228-0518
Ph: 800-222-2768
Fax: 614-274-6899

AMERICAN SOCIETY FOR QUALITY (ASQ)

611 East Wisconscin Ave.
P.O. Box 3005
Milwaukee, WI 53201-3005

Ph: 800-248-1946
Fax: 414-272-1734
Internet: http://www.asq.org

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
Internet: www.astm.org
NOTE: The annual ASTM Book of Standards (66 Vol) is available for $3500.00. Prices of individual standards vary.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

1801 Alexander Bell Drive
Reston, VA 20190-4400
Ph: 800-548-2723
Fax: 703-295-6333
Internet: www.pubs.asce.org
e-mail: marketing@asce.org

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

1791 Tullie Cir., NE
Atlanta, GA 30329
Ph: 800-527-4723 or 404-636-8400
Fax: 404-321-5478
Internet: http://www.ashrae.org

AMERICAN SOCIETY OF SANITARY ENGINEERING FOR PLUMBING AND SANITARY RESEARCH (ASSE)

28901 Clemens Rd, Ste 100, Westlake, OH 44145
Ph: 440-835-3040
Fax: 440-835-3488
E-mail: asse@ix.netcom.com

AMERICAN WATER WORKS ASSOCIATION(AWWA)

6666 West Quincy
Denver, CO 80235
Ph: 800-926-7337
Fax: 303-795-1989
Internet: www.awwa.org

AMERICAN WELDING SOCIETY (AWS)

550 N.W. LeJeune Road
Miami, FL 33126
Ph: 305-443-9353
Fax: 305-443-7559
Internet: http://www.amweld.org

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

3246 Fall Creek Highway, Suite 1900
Grandbury, TX 76049-7979
Ph: 817-326-6300
Fax: 817-326-6306
NOTE: AWPA Book of Standards is published yearly @$75.00; individual standards may be ordered separately for $12.00 to $28.00 each.

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

2130 Barrett Park Dr., Suite 102
Kennesaw, GA 30144-3681
Ph: 770-427-9371
Fax: 770-423-1703
Internet: www.apawood.org
Note: Prices are available only by calling APA

ARCHITECTURAL WOODWORK INSTITUTE (AWI)

1952 Isaac Newton Square
Reston, VA 20190
Ph: 703-733-0600
Fax: 703-733-0584
Internet: www.awinet.org

ASBESTOS CEMENT PIPE PRODUCERS ASSOCIATION (ACPPA)

1745 Jefferson Davis Highway, Suite 406
Arlington, VA 22202
Ph: 703-412-1153
Fax: 703-412-1152

ASME INTERNATIONAL (ASME)

Three Park Avenue
New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: www.asme.org

ASPHALT INSTITUTE (AI)

Research Park Dr.
P.O. Box 14052
Lexington, KY 40512-4052
Ph: 606-288-4960
Fax: 606-288-4999
Internet: www.asphaltinstitute.org
e-mail: asphalti@asphaltinstitute.org

ASSOCIATED AIR BALANCE COUNCIL (AABC)

1518 K St., NW, Suite 503
Washington, DC 20005
Ph: 202-737-0202
Fax: 202-638-4833

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION (AAMI)

3330 Washington Blvd., Suite 400
Arlington, VA 22201-4598
Ph: 703-525-4890
Fax: 703-276-0793
Internet: www.aami.org

ASSOCIATION OF EDISON ILLUMINATING COMPANIES (AEIC)

600 No. 18th St.
P.O. Box 2641
Birmingham, AL 35291-0992
Ph: 205-257-2530
Fax: 205-257-2540
Internet: http://www.aeic.org/index.htm
E-Mail: veazey-white@apc.com

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS (AHAM)

20 No. Wacker Dr., Suite 1500
Chicago, IL 60606
Ph: 312-984-5800
Fax: 312-984-5823
Internet: http://www.aham.org

ASSOCIATION OF IRON AND STEEL ENGINEERS (AISE)

Three Gateway Center, Suite 2350
Pittsburg, PA 15222
Ph: 412-281-6323

BIFMA INTERNATIONAL (BIFMA)

2680 Horizon Drive SE, Suite A-1
Grand Rapids, MI 49546-7500
Ph: 616-285-3963
Fax: 616-285-3765
Internet: www.bifma.com
E-mail: email@bifma.com

BRICK INSTITUTE OF AMERICA (BIA)

11490 Commerce Park Dr., Suite 308
Reston, VA 22091
Ph: 703-620-0010
Fax: 703-620-3928

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

355 Lexington Ave. New York, NY 10017-6603
Ph: 212-661-4261
Fax: 212-370-9047
Internet: www.buildershardware.com

BUILDING OFFICIALS & CODE ADMINISTRATORS INTERNATIONAL (BOCA)

4051 W. Flossmoor Rd.
Country Club Hills, IL 60478
Ph: 708-799-2300
Fax: 708-799-4981
E-mail: boca@aecnet.com

BUREAU OF RECLAMATION (BOR)

Dept. of the Interior
P.O. Box 25007
Denver, CO 80225
Ph: 303-236-0305, ext. 457
Order from:
National Technical Information
Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 800-553-6847
Fax: 703-321-8547
Internet: http://www.fedworld.gov/ntis/ntishome.html

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CDT)

Publication Distribution Unit
1900 Royal Oaks Dr.
Sacramento, CA 95815
Ph: 916-445-3520 or 916-227-7000 (CA Transportation Lab)
Fax: 916-324-8997

CALIFORNIA REDWOOD ASSOCIATION (CRA)

405 Enfrente Ave., Suite 200
Novato, CA 94949
Ph: 415-382-0662
Fax: 415-382-8531

CARPET AND RUG INSTITUTE (CRI)

310 Holiday Ave.
P.O. Box 2048
Dalton, GA 30722-2048
Ph: 706-278-0232
Fax: 706-278-8835
Internet: carpet-rug.com

CAST IRON SOIL PIPE INSTITUTE (CISPI)

5959 Shallowford Rd., Suite 419
Chattanooga, TN 37421
Ph: 423-892-0137
Fax: 423-892-0817

CEILINGS & INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA)

1500 Lincoln Highway, Suite 202
St. Charles, IL 60174
Ph: 708-584-1919
Fax: 708-584-2003

CHLORINE INSTITUTE (CI)

2001 L St., NW
Washington, DC 20036
Ph: 202-775-2790
Fax: 202-223-7225

CODE OF FEDERAL REGULATIONS (CFR)

Order from:
Government Printing Office
Washington, DC 20402
Ph: 202-512-1800
Fax: 202-275-7703
Internet: http://www.pls.com:8001/his/cfr.html

COMMERCIAL ITEM DESCRIPTIONS (CID)

Order from:
General Services Administration
Federal Supply Service Bureau
470 E L'Enfant Plaza, S.W.
Washington, DC 20407
Ph: 202-619-8925
Internet: http://pub.fss.gsa.gov/h1-pub.html

COMPRESSED GAS ASSOCIATION (CGA)

1725 Jefferson Davis Highway, Suite 1004
Arlington, VA 22202-4102
Ph: 703-412-0900
Fax: 703-412-0128
Internet: www.cganet.com
e-mail: Customer_Service@cganet.com

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

933 No. Plum Grove Rd.
Schaumburg, IL 60173-4758
Ph: 847-517-1200
Fax: 847-517-1206
Internet: http://www.crsi.org

CONSUMER PRODUCT SAFETY COMMISSION (CPSC)

Washington, DC 20207
Ph: 301-504-0580

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION (CEMA)

9384-D Forestwood Lane
Manassas, VA 22110
Ph: 703-330-7079
Fax: 703-330-7984

COOLING TOWER INSTITUTE (CTI)

530 Wells Fargo Dr., Suite 218, Houston, TX 77090
Ph: 281-583-4087
Rax: 281-537-1721

COPPER DEVELOPMENT ASSOCIATION (CDA)

260 Madison Ave.
New York, NY 10016
Ph: 212-251-7200
Fax: 212-251-7234
E-mail: http://www.copper.org

CORPS OF ENGINEERS (COE)

Order from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services
Branch, TIC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Ph: 601-634-2571
Fax: 601-634-2506
NOTE: COE Handbook for Concrete and Cement (Documents w/prefix CRD-C) (1949-present; 2 Vol) free to Government offices; $10.00 plus $8.00 per yr for 4 qtrly supplements to others). Individual documents, single copies free. Order from address above.

COUNCIL OF AMERICAN BUILDING OFFICIALS (CABO)

5203 Leesburg Pike, Suite 708

Falls Church, VA 22041
Ph: 703-931-4533
Fax: 703-379-1546

DEPARTMENT OF AGRICULTURE (USDA)

14TH STREET & INDEPENDENCE AVE. S.W.
WASHINGTON, D.C. 20250
Ph: (202) 720-2791
Publications: 301-344-2340

DEPARTMENT OF COMMERCE (DOC)

Order From:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-487-4600
Fax: 703-321-8547
Internet: http://www.ntis.gov

DEPARTMENT OF DEFENSE (DOD)

Order from:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-487-4650
FAX: 703-321-8547

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

Order from:
HUD User
P.O. Box 6091
Rockville, MD 20850
Ph: 800-245-2691
e-mail: Huduser@aspensys.com

DEPARTMENT OF STATE (SD)

ATTN: DS/PSP/SEP
SA-6, Room 804
Washington, DC 20522-0602
Ph: 703-875-6537

DOOR AND ACCESS SYSTEM MANUFACTURERS ASSOCIATION (DASMA)

1300 Sumner Avenue
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: www.taol.com/dasma
e-mail: dasma@taol.com

DOOR AND HARDWARE INSTITUTE (DHI)

14170 Newbrook Dr.
Chantilly, VA 20151-2232

Ph: 703-222-2010
Fax: 703-222-2410
Internet: www.dhi.org
E-mail: techdept@dhi.org

DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA)

245 Riverchase Parkway East, Suite 0
Birmingham, AL 35244-1856
Ph: 205-988-9870
Fax: 205-988-9822
Internet: www.dipra.org
E-mail: info@dipra.org

EIFS INDUSTRY MEMBERS ASSOCIATION (EIMA)

402 No. 4th St., Suite 102
Yakima, WA 98901-2470
Ph:
Fax: 509-457-0169

ELECTRONIC INDUSTRIES ASSOCIATION (EIA)

2500 Wilson Blvd.
Arlington, VA 22201-3834
Ph: 703-907-7500
Fax: 703-907-7501
Internet: www.eia.org

ENGINEERING MANUALS (EM)

USACE Publications Depot
Attn: CEIM-SP-D
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081

ENGINEERING PAMPHLETS (EP)

USACE Publications Depot
Attn: CEIM-SP-D
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081

ENGINEERING REGULATIONS (ER)

USACE Publications Depot
Attn: CEIM-SP-D 2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Public Information Center
401 M St., SW
Washington, DC 20460
Ph: 800-490-9198
FAX: 202-260-6257

Internet: http://www.epa.gov
NOTE: Some documents are available only from: National Technical Information Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 800-553-6847
Fax: 703-321-8547
Internet: http://www.fedworld.gov/ntis/ntishome.html

EXPANSION JOINT MANUFACTURERS ASSOCIATION (EJMA)

25 No. Broadway
Tarrytown, NY 10591
Ph: 914-332-0040

FACTORY MUTUAL ENGINEERING AND RESEARCH (FM)

1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, MA 02062-9102
Ph: 617-255-4681
Fax: 617-255-4359
Internet: http://www.factorymutual.com

FEDERAL AVIATION ADMINISTRATION (FAA)

Order from:
Superintendant of Documents
U. S. Government Printing Office
Washington, DC 20402
Ph: 202-512-1800
Fax: 202-512-1356
For free documents, order from:
Federal Aviation Administration
Dept. of Transportation
ATTN: General Services Section M-45
400 Seventh St., SW
Washington, DC 20590-0001
Ph: 202-619-8925
Fax: 202-619-8978
Internet: www.faa.gov

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Office of Highway Safety (HHS-31)
400 Seventh St., SW
Washington, DC 20590-0001
Ph: 202-366-0411
Fax: 202-366-2249
Order from:
Government Printing Office
Superintendent of Documents
Washington, DC 20402
Ph: 202-783-3238

FEDERAL SPECIFICATIONS (FS)

Order from:
General Services Administration

Federal Supply Service Bureau
470 L'Enfant Plaza, S.W.
Washington, DC 20407
Ph: 202-619-8925
Fax: 202-619-8978
Internet: http://pub.fss.gsa.gov/

FEDERAL STANDARDS (FED-STD)

Order from:
General Services Administration
Federal Supply Service Bureau
470 E L'Enfant Plaza, S.W.
Washington, DC 20407
Ph: 202-619-8925
Fax: 202-619-8978
Internet: http://pub.fss.gsa.gov/

FORESTRY SUPPLIERS (FSUP)

205 West Rankin St.
Jackson, MS 39201
Ph: 800-647-5368
Fax: 800-543-4203
Internet: www.forestry-suppliers.com

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)

USC
KAP-200 University Park MC-2531
Los Angeles, CA 90089-2531
Ph: 213-740-2032
Fax: 213-740-8399

GEOLOGICAL SOCIETY OF AMERICA (GSA)

P.O. Box 9140
Boulder, CO 80301
Ph: 800-472-1988
Fax: 303-447-1133

GEOSYNTHETIC INSTITUTE (GSI)

475 Kedron Ave.
Folsom, PA 19033-1208
Ph: 610-522-8440
Fax: 610-522-8441

GERMANY INSTITUTE FOR STANDARDIZATION (DIN)

Order from a United States publications service.

GLASS ASSOCIATION OF NORTH AMERICA (GANA)

3310 S.W. Harrison St.
Topeka, KS 66611-2279
Ph: 913-266-7013
Fax: 913-266-0272

Internet:www.cssinfo.com/info/gana.html

GRETAG MACBETH (GM)

Munsell Department
ATTN: Customer Service
617 Little Britain Road
New Windsor, NY 12553-6184
Ph: 800-662-2384 or 914-566-7660, Ext 347
Fax: 914-561-0267
Internet: http://www.munsell.com/munsell5.htm

GYPSUM ASSOCIATION (GA)

810 First St. NE, Suite 510
Washington, DC 20002
Ph: 202-289-5440
Fax: 202-289-3707

HARDWOOD PLYWOOD & VENEER ASSOCIATION (HPVA)

1825 Michael Faraday Dr.
P.O. Box 2789
Reston, VA 22090-2789
Ph: 202-435-2900
Fax: 703-435-2537

HEAT EXCHANGE INSTITUTE (HEI)

1300 Sumner Ave
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105

H.P. WHITE LABORATORY (HPW)

3114 Scarboro Rd.
Street, MD 21154
Ph: 410-838-6550

HYDRAULIC INSTITUTE (HI)

9 Sylvan Way, Suite 180
Parsippany, NJ 07054-3802
Ph: 888-786-7744 or 973-267-9700
Fax: 973-267-9053

HYDRONICS INSTITUTE DIVISION OF GAMA (HYI)

35 Russo Pl.
P.O. Box 218
Berkeley Heights, NJ 07922-0218
Ph: 908-464-8200
Fax: 908-464-7818
Internet: www.gamanet.org

IBM CORPORATION (IBM)

Publications

P.O. Box 29570
Raleigh, NC 27626-0570
Ph: 800-879-2755, Option 1
Fax: 800-445-9269
Internet: www.ibmink.ibm.com

ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)

120 Wall St., 17th Floor
New York, NY 10005-4001
Ph: 212-248-5000
Fax: 212-248-5017
Internet: www.iesna.org

INDUSTRIAL FASTENERS INSTITUTE (IFI)

1717 East 9th St., Suite 1105
Cleveland, OH 44114-2879
Ph: 216-241-1482
Fax: 216-241-5901
Internet: http://www.industrial-fasteners.org
e-mail: indfast@aol.com

INSECT SCREENING WEAVERS ASSOCIATION (ISWA)

P.O. Box 1018
Ossining, NY 10562
Ph: 914-962-9052
Fax: 914-923-3031

INSTITUTE FOR INTERCONNECTING AND PACKAGING ELECTRONIC CIRCUITS (IPC)

2215 Sanders Rd.
Northbrook, IL 60062-6135
Ph: 847-509-9700
Fax: 847-509-9798
Internet: www.ipc.org
e-mail: orderipc@ipc.org

INSTITUTE OF CLEAN AIR COMPANIES (ICAC)

1660 L St., NW, Suite 1100
Washington, DC 20036-5603
Ph: 202-457-0911
Fax: 202-331-1388
E-mail: sjenkins@icac.com
Internet: icac.com

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

445 Hoes Ln, P. O. Box 1331
Piscataway, NJ 08855-1331
Ph: 732-981-0060 OR 800-701-4333
Fax: 732-981-9667
Internet: http//www.standards.ieee.org
E-mail: customer.service@ieee.org

INSTITUTE OF ENVIRONMENTAL SCIENCES (IES)

940 East Northwest Highway
Mount Prospect, IL 60056
Ph: 847-255-1561
Fax: 847-255-1699

INSULATED CABLE ENGINEERS ASSOCIATION (ICEA)

P.O. Box 440
South Yarmouth, MA 02664
Ph: 508-394-4424
Fax: 508-394-1194
E-mail: www.electricnet.com/orgs/insucbl.htm

INTERNATIONAL APPROVAL SERVICES (IAS)

8501 East Pleasant Valley Rd.
Cleveland, OH 44131
Ph: 216-524-4990
Fax: 216-642-3463
Internet: www.iasapprovals.org

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO)

20001 Walnut Dr., So.
Walnut, CA 91789-2825
Ph: 909-595-8449
Fax: 909-594-3690
Fax for Stds: 909-594-5265
Internet: www.iapmo.org

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO)

5360 Workman Mill Rd.
Whittier, CA 90601-2298
Ph: 310-699-0541
Fax: 310-692-3853

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

3, rue de Varembe, Case Postale 131
CH-1211 Geneva 20, Switzerland
Ph: 41-22-919-0211
Fax: 41-22-919-0300
Internet: http://www.iec.ch
e-mail: custserv@iec.ch

INTERNATIONAL INSTITUTE OF AMMONIA REFRIGERATION (IIAR)

1200 Nineteenth St., NW, Suite 300
Washington, DC 20036-2912
Ph: 202-857-1110
Fax: 202-223-4579

INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA)

165 East Union St. P.O. Box 539
Newark, NY 14513

Ph: 315-331-2182
Fax: 315-331-8505

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

Internet: www.iso.ch

INTERNATIONAL SLURRY SURFACING ASSOCIATION (ISSA)

1200 Nineteenth St., NW, Suite 300
Washington, DC 20036-2401
Ph: 202-857-1160
Fax: 202-223-4579
Internet: http://www.rochester.edu/issa/

INTERNATIONAL TELECOMMUNICATION UNION (ITU)

Order from:
U.S. Dept of Commerce
National Technical Information Service
585 Port Royal Road.
Springfield, VA 22161
Ph: 703-487-4660
FAX: 703-321-8547
For documents not avail from Dept of Commerce:
E-Mail: sales@itu.ch
Fax: 41.22.730.5194

IRON & STEEL SOCIETY (ISS)

410 Commonwealth Dr.
Warrendale, PA 15086-7512
Ph: 412-776-1535, ext. 1
Fax: 412-776-0430
E-Mail: custserv @ issource.org
Internet: www.issourse.org

ISA (ISA)

67 Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709
Ph: 919-549-8411
Fax: 919-549-8288
e-mail: ISA@isa.org
Internet: http://www.isa.org

KITCHEN CABINET MANUFACTURERS ASSOCIATION (KCMA)

1899 Preston White Dr.
Reston, VA 20191-5435
Ph: 703-264-1690
Fax: 703-620-6530
Internet: www.kcma.org

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY (MSS)

127 Park St., NE

Vienna, VA 22180-4602
Ph: 703-281-6613
Fax: 703-281-6671
Internet: //cssinfo.com/info/mss/html

MAPLE FLOORING MANUFACTURERS ASSOCIATION (MFMA)

60 Revere Dr., Suite 500
Northbrook, IL 60062
Ph: 847-480-9138
Fax: 847-480-9282
e-mail: mfma@maplefloor.com

MARBLE INSTITUTE OF AMERICA (MIA)

33505 State St.
Farmington, MI 48335
Ph: 810-476-5558
Fax: 810-476-1630

MATERIAL HANDLING INDUSTRY (MHI)

8720 Red Oak Blvd., Suite 201
Charlotte, NC 28217-3992
Ph: 800-345-1815 or 704-522-9644
Fax: 704-522-7826

METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA)

1300 Sumner Ave.
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105

MIDWEST INSULATION CONTRACTORS ASSOCIATION (MICA)

2017 So. 139th Cir.
Omaha, NE 68144
Ph: 402-342-3463
Fax: 402-330-9702

MILITARY HANDBOOKS (MIL-HDBK)

Order from:
Standardization Documents Order Desk
Bldg 4D
700 Robbins AV
Philadelphia, PA 19111-5094
Ph: 215-697-2179
Fax: 215-697-2978
Internet: www.dodssp.daps.mil

MILITARY SPECIFICATIONS (MS)

Order from:
Standardization Documents Order Desk
Building 4, Section D
700 Robbins Ave.
Philadelphia, PA 19111-5094

Ph: 215-697-2179
Fax: 215-697-2978
Internet: www.dodssp.daps.mil

MILITARY STANDARDS (MIL-STD)

Order from:
Standardization Documents Order Desk
Building 4, Section D
700 Robbins Ave.
Philadelphia, PA 19111-5094
Ph: 215-697-2179
Fax: 215-697-2978
Internet: www.dodssp.daps.mil

NACE INTERNATIONAL (NACE)

1440 South Creek Drive
Houston, TX 77084
Ph: 281-228-6200
Fax: 281-228-6300
Internet: www.nace.org

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

8 So. Michigan Ave, Suite 100
Chicago, IL 60603
Ph: 312-782-4951
Internet: www.naamm.org

NATIONAL ASSOCIATION OF PLUMBING-HEATING-COOLING CONTRACTORS (NAPHCC)

180 S. Washington Street
P.O. Box 6808
Falls Church, VA 22046
Ph: 800-533-7694
Fax: 703-237-7442

NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS (NBBPVI)

1055 Crupper Ave.
Columbus, OH 43229-1183
Ph: 614-888-2463
Fax: 614-847-1147
e-mail: orders @ nationalboard.org

NATIONAL CABLE TELEVISION ASSOCIATION (NCTA)

1724 Massachusetts Ave. NW
Washington, DC 20036-1969
Ph: 202-775-3550
Fax: 202-775-3698

NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)

2302 Horse Pen Road
Herndon, VA 2071-3499
Ph: 703-713-1900

Fax: 703-713-1910
Internet: http://www.ncma.org

NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS (NCRP)

7910 Woodmont Ave., Suite 800
Bethesda, MD 20814-3095
Ph: 800-229-2652
Fax: 301-907-8768

NATIONAL DRILLING ASSOCIATION (NDA)

3008 Millwood Avenue
Columbia, SC 29205

Ph: 800-445-8629 or 803-252-5646
Fax: 803-765-0860
email: info@nda4U.com
Internet: http://www.nda4U.com

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

1300 N. 17th St., Suite 1847
Rosslyn, VA 22209
Ph: 703-841-3200
Fax: 703-841-3300
Internet: http//www.nema.org/

NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)

8575 Grovemont Circle
Gaithersburg, MD 20877-4121
Ph: 301-977-3698
Fax: 301-977-9589

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

One Batterymarch Park P.O. Box 9101
Quincy, MA 02269-9101
Ph: 800-344-3555
Fax: 800-593-6372
Internet: http://www.nfpa.org
NOTE: The complete set of 1997 NFPA National Fire Codes (13 Vol.) is available for $835.00.

NATIONAL FLUID POWER ASSOCIATION (NFLPA)

3333 No. Mayfair Rd.
Milwaukee, WI 53222-3219
Ph: 414-778-3363
Fax: 414-778-3361
Internet: www.nfpa.com
E-mail: nfpa@nfpa.com

NATIONAL HARDWOOD LUMBER ASSOCIATION (NHLA)

P.O. Box 34518
Memphis, TN 38184-0518
Ph: 901-377-1818

Fax: 901-382-6419
e-mail: nhla@natlhardwood.org

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET)

1420 King Street
Alexandria, VA 22314-2794
Ph: 888-476-4238
Internet: www.nicet.org

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

Mail Stop C-13
4676 Columbia Parkway
Cincinnati, OH 45226-1998
Ph: 800-356-4676
Internet: http://www.cdc.gov/niosh/homepage.html
To order pubs for which a fee is charged, order from:
Superintendent of Documents
Government Printing Office
Washington, DC 20402-9325
Ph: 202-512-1800
Fax: 202-512-2250

NATIONAL INSTITUTE OF JUSTICE (NIJ)

National Law Enforcement and Corrections Technology Center
2277 Research Blvd. - Mailstop 1E
Rockville, MD 20850
Ph: 800-248-2742 or 301-519-5060
Fax: 301-519-5179
Internet: http://www.nlectc.org
e-mail: nlectc@aspensys.com

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

Department of Commerce
Gaithersburg, MD 20899-0001
Ph: 301-975-4025
Fax: 301-926-1630
Order Publications From:
Superintendent of Documents
U.S. Government Printing Office (GPO)
Washington, DC 20402
Ph: 202-512-1800
Fax: 202-512-2250
or
National Technical Information Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 800-553-6847
Fax: 703-321-8547
Internet: http://ww.gov/ntis.gov

NATIONAL OAK FLOORING MANUFACTURERS ASSOCIATION (NOFMA)

P.O. Box 3009
Memphis, TN 38173-0009

Ph: 901-526-5016
Fax: 901-526-7022

NATIONAL READY-MIXED CONCRETE ASSOCIATION (NRMCA)

900 Spring St.
Silver Spring, MD 20910
Ph: 301-587-1400
Fax: 301-585-4219

NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)

P.O. Box 809261
Chicago, IL 60680-9261
Ph: 800-323-9545
Fax: 708-299-1183

NATIONAL TERRAZZO & MOSAIC ASSOCIATION (NTMA)

3166 DesPlaines Ave., Suite 132
DesPlaines, IL 60018
Ph: 708-635-7744
Fax: 708-635-9127

NATIONAL WOOD WINDOW & DOOR ASSOCIATION (NWWDA)

1400 East Touhy Ave., Suite G-54
Des Plaines, IL 60018
Ph: 847-299-5200
Fax: 708-299-1286

NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

1510 Gilbert St.
Norfolk, VA 23511-2699
Ph: 757-322-4200
Fax: 757-322-4416

NAVAL FACILITIES ENGINEERING SERVICE CENTER (NFESC)

560 Center Drive
Port Hueneme, CA 93043-4328
Ph: 805-982-5661

NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION (NAIMA)

44 Canal Center Plaza, Suite 310
Alexandria, VA 22314
Ph: 703-684-0084

NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION (NELMA)

P.O. Box 87A
Cumberland Center, ME 04021
Ph: 207-829-6901
Fax: 207-829-4293

NORTHEAST REGIONAL AGRICULTURAL ENGINEERING SERVICE (NRAES)

Cooperative Extension
152 Riley-Robb Hall
Ithaca, NY 14853-5701
Ph: 607-255-7654
Fax: 607-254-8770
Internet: http://rcwpsun.cas.psu.edu/nraes
E-mail: nraes@cornell.edu

NSF INTERNATIONAL (NSF)

ATTN: Publications
P.O. Box 130140
789 Dixboro Rd.
Ann Arbor, MI 48113-0140
Ph: 734-769-8010
Fax: 734-769-0109
Toll Free: 800-NSF-MARK
Internet: www.nsf.org

PIPE FABRICATION INSTITUTE (PFI)

3211 Jermantown Rd, Ste. 100, Fairfax, VA 22030
Ph: 514-634-3434
Fax: 514-634-9736

PLASTIC PIPE AND FITTINGS ASSOCIATION (PPFA)

800 Roosevelt Rd., Bldg C, Suite 20
Glen Ellyn, IL 60137
Ph: 630-858-6540
Fax: 630-790-3095

PLASTICS PIPE INSTITUTE (PPI)

1801 L St. NW, Suite 600K
Washington, D. C. 20006-1301
Ph: 888-314-6774
Fax: 202-293-0048
Internet: http://www.plasticpipe.org
Order Publications from:
SPI
P. O. Box 753
Waldorf, MD 20604
Ph: 202-974-5332
Fax: 800-541-0736 or 202-296-7359

PLUMBING AND DRAINAGE INSTITUTE (PDI)

45 Bristol Dr., Suite 101.
South Easton, MA 02375
Ph: 508-230-3516
Fax: 508-230-3529
E-Mail: pdhw@tiac.net

PLUMBING AND PIPING INDUSTRY COUNCIL (PPIC)

501 Shatto Place, Suite 402
Los Angeles, CA 90020
Ph: 310-381-3040

Fax: 213-487-3880

PORCELAIN ENAMEL INSTITUTE (PEI)

4004 Hillsboro Pike, Suite 224B
Nashville, TN 37215
Ph: 615-385-5357
Fax: 615-385-5463
Internet: www.porcelainenamel.com

PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI)

175 West Jackson Blvd., Suite 1859
Chicago, IL 60604-9773
Ph: 312-786-0300
Fax: 312-786-0353
Internet: www.pci.org
e-mail: info@pci.org

RUBBER MANUFACTURERS ASSOCIATION (RMA)

1400 K St., NW
Washington, DC 20005
Ph: 202-682-4866
Fax: 202-682-4810
Order Publications from:
The Mail Room
P. O. Box 3147
Medina, OH 44258
Ph: 800-325-5098 or 330-723-2987
Fax: 330-725-0576

RURAL UTILITIES SERVICE (RUS)

ATTN: Publications
14th and Independence Ave., SW, Room 4028-S
Washington, DC 20250
Ph: 202-720-8674 OR 202-720-8679
Fax: 202-205-3654
Internet: www.usda.gov/rus

SCREEN MANUFACTURERS ASSOCIATION (SMA)

2850 South Ocean Boulevard, Suite 114
Palm Beach, FL 33480-5535
Ph: 561-533-0991
Fax: 561-533-7466
e-mail: fscottfitzgerald@compuserve.com

SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

4201 Lafayette Center Dr.,
Chantilly, VA 20151-1209

Ph: 703-803-2980
Fax: 703-803-3732
Internet: http://www.smacna.org

SINGLE PLY ROOFING INSTITUTE (SPRI)

200 Reservoir St., Suite 309A
Needham, MA 02494
Ph: 781-444-0242
Fax: 781-444-6111
Internet: www.spri.org

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

400 Commonwealth Dr.
Warrendale, PA 15096-0001
Ph: 724-776-4841
Fax: 724-776-5760
Internet: http://www.sae.org
e-mail: publications@sae.org

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL (SBCCI)

900 Montclair Road
Birmingham, AL 35213-1206
Ph: 205-591-1853
Fax: 205-591-0775

SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION (SCMA)

400 Penn Center Boulevard, Suite 530
Pittsburgh, PA 15235
Ph: 412-829-0770
Fax: 412-829-0844

SOUTHERN PINE INSPECTION BUREAU (SPIB)

4709 Scenic Highway
Pensacola, FL 32504-9094
Ph: 850-434-2611
Fax: 850-433-5594
e-mail: spib@spib.org

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

40 24th Street, 6th Floor
Pittsburgh, PA 15222-4656
Ph: 412-281-2331
Fax: 412-281-9992
Internet: www.sspc.org
NOTE: SSPC documents, except as noted otherwise, are available only as a part of the 1995 Steel Structures Painting Manual, 7th Edition @ $115.00. \F

STEEL DECK INSTITUTE (SDI)

P.O. Box 25
Fox River Grove, IL 60021
Ph: 847-462-1930
Fax: 847-462-1940
Internet: http://www.sdi.org
e-mail: janet@sdi.org

STEEL DOOR INSTITUTE (SDOI)

30200 Detroit Rd.
Cleveland, OH 44145-1967
Ph: 216-899-0010
Fax: 216-892-1404

STEEL JOIST INSTITUTE (SJI)

3127 Tenth Ave., North Ext.
Myrtle Beach, SC 29577-6760
Ph: 803-626-1995
Fax: 803-626-5565

STEEL TANK INSTITUTE (STI)

570 Oakwood Rd.
Lake Zurich, IL 60047
Ph: 847-438-8265
Fax: 847-438-4500
Internet: www.steeltank.com
e-mail: technic@interaccess.com

STEEL WINDOW INSTITUTE (SWI)

1300 Sumner Ave.
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105

TILE COUNCIL OF AMERICA (TCA)

P.O. Box 1787
Clemson, SC 29633-1787
Ph: 864-646-8453
FAX: 864-646-2821

TRUSS PLATE INSTITUTE (TPI)

583 D'Onofrio Dr., Suite 200
Madison, WI 53719
Ph: 608-833-5900
Fax: 608-833-4360

TUBULAR EXCHANGE MANUFACTURERS ASSOCIATION (TEMA)

25 N. Broadway
Tarrytown, NY 10591
Ph: 914-332-0040
Fax: 914-332-1541

UNDERWRITERS LABORATORIES (UL)

333 Pfingsten Rd.
Northbrook, IL 60062-2096
Ph: 847-272-8800
Fax: 847-272-8129
Internet: http://www.ul.com/

Note: First price is for the standard only. Second price is for the standard including the Revision Subscription Service.

UNI-BELL PVC PIPE ASSOCIATION (UBPPA)

2655 Villa Creek Dr., Suite 155
Dallas, TX 75234
Ph: 214-243-3902
Fax: 214-243-3907

U. S. ARMY ENVIORNMENTAL HYGIENE AGENCY (USAEHA)

Waste Disposal Engineering Division
Aberdeen Proving Ground, MD 21010-5422
Ph: 410-671-3652

WATER ENVIRONMENT FEDERATION (WEF)

601 Wythe St.
Alexandria, VA 22314-1994
Ph: 703-684-2400
Fax: 703-684-2492
Internet: www.wef.org

WATER QUALITY ASSOCIATION (WQA)

4151 Naperville Rd.
Lisle, IL 60532
Ph: 630-505-0160
Fax: 630-505-9637

WEST COAST LUMBER INSPECTION BUREAU (WCLIB)

P.O. Box 23145
Portland, OR 97281
Ph: 503-639-0651
Fax: 503-684-8928

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)

7017 N.E. Highway 99 # 108
Vancover, WA 98666
Ph: 360-693-9958
Fax: 360-693-9967

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)

Yeon Bldg.
522 SW 5th Ave.
Portland, OR 97204-2122
Ph: 503-224-3930
Fax: 503-224-3934

WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMMPA)

507 First Street
Woodland, CA 95695
Ph: 916-661-9591
Fax: 916-661-9586

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 LUMP SUM PAYMENT ITEMS (Not Applicable)
1.4 UNIT PRICE PAYMENT ITEMS
1.4.1 Remove/Return Office/Warehouse Furniture & Equipment
1.4.1.1 Payment
1.4.1.2 Measurement
1.4.1.3 Unit of Measure
1.4.2 Decon Facility
1.4.2.1 Payment
1.4.2.2 Measurement
1.4.2.3 Unit of Measure
1.4.3 Enclosures/Containment
1.4.3.1 Payment
1.4.3.2 Measurement
1.4.3.3 Unit of Measure
1.4.4 Scaffolding
1.4.4.1 Payment
1.4.4.2 Measurement
1.4.4.3 Unit of Measure
1.4.5 Air Monitoring
1.4.5.1 Payment
1.4.5.2 Measurement
1.4.5.3 Unit of Measure
1.4.6 Clearance Sampling/Testing
1.4.6.1 Payment
1.4.6.2 Measurement
1.4.6.3 Unit of Measure
1.4.7 Abatement of Pipe Insulation
1.4.7.1 Payment
1.4.7.2 Measurement

1.4.7.3 Unit of Measure
1.4.8 Abate Pipe Components (glove bag) and Remove Pipe With ACM's
1.4.8.1 Payment
1.4.8.2 Measurement
1.4.8.3 Unit of Measure
1.4.9 Abate Spray-on Insulation and Insulation Overspray
1.4.9.1 Payment
1.4.9.2 Measurement
1.4.9.3 Unit of Measure
1.4.10 Abate Ceilings
1.4.10.1 Payment
1.4.10.2 Measurement
1.4.10.3 Unit of Measure
1.4.11 Abate Air Ducts and Mechanical Equipment
1.4.11.1 Payment
1.4.11.2 Measurement
1.4.11.3 Unit of Measure
1.4.12 Abatement of Non-friable ACM's
1.4.12.1 Payment
1.4.12.2 Measurement
1.4.12.3 Unit of Measure
1.4.13 Remove Soil With ACM's
1.4.13.1 Payment
1.4.13.2 Measurement
1.4.13.3 Unit of Measure
1.4.14 Abate Walls With ACM's
1.4.14.1 Payment
1.4.14.2 Measurement
1.4.14.3 Unit of Measure
1.4.15 Abate and Replace Windows With ACM's
1.4.15.1 Payment
1.4.15.2 Measurement
1.4.15.3 Unit of Measure
1.4.16 Apply Lockdown
1.4.16.1 Payment
1.4.16.2 Measurement
1.4.16.3 Unit of Measure
1.4.17 Handling/Transportation/Disposal of ACM's
1.4.17.1 Payment
1.4.17.2 Measurement
1.4.17.3 Unit of Measure

1.4.18 Sampling/Testing of Lead-based Materials
- 1.4.18.1 Payment
- 1.4.18.2 Measurement
- 1.4.18.3 Unit of Measure

1.4.19 Remove/Replace Doors With LBP
- 1.4.19.1 Payment
- 1.4.19.2 Measurement
- 1.4.19.3 Unit of Measure

1.4.20 Abate Surfaces With LBP Through Encapsulation
- 1.4.20.1 Payment
- 1.4.20.2 Measurement
- 1.4.20.3 Unit of Measure

1.4.21 Abate LBP Surfaces by Chemical Stripping
- 1.4.21.1 Payment
- 1.4.21.2 Measurement
- 1.4.21.3 Unit of Measure

1.4.22 Abate LBP Surfaces by Mechanical Means
- 1.4.22.1 Payment
- 1.4.22.2 Measurement
- 1.4.22.3 Unit of Measure

1.4.23 Removal of Soil With Lead Materials
- 1.4.23.1 Payment
- 1.4.23.2 Measurement
- 1.4.23.3 Unit of Measure

1.4.24 Handling/Transportation/Disposal of Materials With Lead
- 1.4.24.1 Payment
- 1.4.24.2 Measurement
- 1.4.24.3 Unit of Measure

1.4.25 Remove Lighting Ballasts With PCB's
- 1.4.25.1 Payment
- 1.4.25.2 Measurement
- 1.4.25.3 Unit of Measure

1.4.26 Remove PCB Spills
- 1.4.26.1 Payment
- 1.4.26.2 Measurement
- 1.4.26.3 Unit of Measure

1.4.27 Remove Soil Contaminated With PCB's
- 1.4.27.1 Payment

1.4.27.2 Measurement
1.4.27.3 Unit of Measure

1.4.28 Sampling/Testing for PCB's
1.4.28.1 Payment
1.4.28.2 Measurement
1.4.28.3 Unit of Measure
1.4.29 Handling/Transportation/Disposal of PCB's
1.4.29.1 Payment
1.4.29.2 Measurement
1.4.29.3 Unit of Measure
1.4.30 Demolition of Buildings/Building Components
1.4.30.1 Payment
1.4.30.2 Measurement
1.4.30.3 Unit of Measure
1.4.31 Break and Remove Reinforced Concrete
1.4.31.1 Payment
1.4.31.2 Measurement
1.4.31.3 Unit of Measure
1.4.32 Remove Subflooring and Wall Materials
1.4.32.1 Payment
1.4.32.2 Measurement
1.4.32.3 Unit of Measure
1.4.33 Removal of Complete Structures
1.4.33.1 Payment
1.4.33.2 Measurement
1.4.33.3 Unit of Measure
1.4.34 Transportation/Disposal of Materials from Demolition Work
1.4.34.1 Payment
1.4.34.2 Measurement
1.4.34.3 Unit of Measure
1.4.35 Perform Rough and Finish Carpentry
1.4.35.1 Payment
1.4.35.2 Measurement
1.4.35.3 Unit of Measure
1.4.36 Replace Metal Roof and Siding
1.4.36.1 Payment
1.4.36.2 Measurement
1.4.36.3 Unit of Measure

1.4.37 Perform Caulking and Sealing of Restoration Work
- 1.4.37.1 Payment
- 1.4.37.2 Measurement
- 1.4.37.3 Unit of Measure

1.4.38 Apply Stucco, 3 Coats
- 1.4.38.1 Payment
- 1.4.38.2 Measurement
- 1.4.38.3 Unit of Measure

1.4.39 Install New Doors, Interior/Exterior
- 1.4.39.1 Payment
- 1.4.39.2 Measurement
- 1.4.39.3 Unit of Measure

1.4.40 Install Gypboard, Interior
- 1.4.40.1 Payment
- 1.4.40.2 Measurement
- 1.4.40.3 Unit of Measure

1.4.41 Install Ceiling Systems
- 1.4.41.1 Payment
- 1.4.41.2 Measurement
- 1.4.41.3 Unit of Measure

1.4.42 Install Floor Coverings/Coving
- 1.4.42.1 Payment
- 1.4.42.2 Measurement
- 1.4.42.3 Unit of Measure

1.4.43 Install Wall Coverings, Interior
- 1.4.43.1 Payment
- 1.4.43.2 Measurement
- 1.4.43.3 Unit of Measure

1.4.44 Insulation of Hot and Cold Water Piping Systems
- 1.4.44.1 Payment
- 1.4.44.2 Measurement
- 1.4.44.3 Unit of Measure

1.4.45 Insulation of Equipment, General and ACS Ductwork
- 1.4.45.1 Payment
- 1.4.45.2 Measurement
- 1.4.45.3 Unit of Measure

1.4.46 Painting, General

1.4.46.1 Payment
1.4.46.2 Measurement
1.4.46.3 Unit of Measure
1.4.47 Landscaping, Import and Place Select Material
1.4.47.1 Payment
1.4.47.2 Measurement
1.4.47.3 Unit of Measure

1.4.48 Landscaping, Installation of Irrigation Systems
1.4.48.1 Payment
1.4.48.2 Measurement
1.4.48.3 Unit of Measure
1.4.49 Landscaping, Soil Treatment, Hydroseeding and Placement of Sod
1.4.49.1 Payment
1.4.49.2 Measurement
1.4.49.3 Unit of Measure
1.4.50 Landscaping, Plant Sprigs and Trees
1.4.50.1 Payment
1.4.50.2 Measurement
1.4.50.3 Unit of Measure
1.4.51 Clean ACS, Access to System Components
1.4.51.1 Payment
1.4.51.2 Measurement
1.4.51.3 Unit of Measure
1.4.52 Clean ACS, Remove and Replace Flex Duct
1.4.52.1 Payment
1.4.52.2 Measurement
1.4.52.3 Unit of Measure
1.4.53 Clean ACS, Various Devices, Units and Plenums
1.4.53.1 Payment
1.4.53.2 Measurement
1.4.53.3 Unit of Measure
1.4.54 Sanitize Cleaned ACS Components
1.4.54.1 Payment
1.4.54.2 Measurement
1.4.54.3 Unit of Measure
1.4.55 Replace Air Filters and Frames
1.4.55.1 Payment
1.4.55.2 Measurement

1.4.55.3 Unit of Measure
1.4.56 Verification Testing of Cleaned ACS Components
1.4.56.1 Payment
1.4.56.2 Measurement
1.4.56.3 Unit of Measure
1.4.57 Handling, Transportation and Disposal of Accumulated Debris
1.4.57.1 Payment
1.4.57.2 Measurement
1.4.57.3 Unit of Measure

1.4.58 Labor Pool
1.4.58.1 Payment
1.4.58.2 Measurement
1.4.58.3 Unit of Measure
1.4.59 Equipment Pool
1.4.59.1 Payment
1.4.59.2 Measurement
1.4.59.3 Unit of Measure
1.4.60 Material Pool
1.4.60.1 Payment
1.4.60.2 Measurement
1.4.60.3 Unit of Measure
1.4.61 Notification Fee
1.4.61.1 Payment
1.4.61.2 Measurement
1.4.61.3 Unit of Measure

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES

The publication listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by designation only. This publication is attached at the end of the Section. Additional references are found in Section 01090 and the technical specifications, Division 02.

National Air Duct Cleaners Association (NADCA)	NADCA Standard 1992-01: Mechanical Cleaning of Non-Porous Air Conveyance System Components

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are only for information. The following items shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

Procedures for Cleaning Air Conveyance System(ACS) Components	GA
Verification Testing Procedures for Cleaning ACS Components	GA

Details for Installing Steel Access Panels/Doors to ACS Components	GA
MSDS for EPA Approved Sanitizer (ACS Cleaning)	FIO
Electrostatic Air Filter and Frame (CLIN 0075)	FIO

The above submittals are required in accordance with this Section. Contractors must prepare additional submittals in conformance with other administrative and technical specification sections, or as stipulated in individual task orders.

1.3 LUMP SUM PAYMENT ITEMS. (Not Applicable)

1.4 UNIT PRICE PAYMENT ITEMS

Payment items for the work issued under the task orders of this contract on the which the contract unit price payments will be made are listed in Section 00010, Schedule of Supplies or Services and Prices/Costs, and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials and equipment and performing any associated Contractor quality control, jobsite supervision, environmental protection, obtaining permits or giving public notices, meeting safety requirements, performing tests, preparing reports and for performing all work required by the specifications for each of the unit price items.

To facilitate pricing and reduce the potential for ambiguities, the paragraphs below also include direct references to the applicable CLIN's (Base Period only, guidance also applies to same CLIN's in the Option Periods) and specification sections that apply to the work being described.

1.4.1 Remove/Return Office/Warehouse Furniture & Equipment (CLIN's 0001-0002)

1.4.1.1 Payment

Payment will be made for all costs associated with removing office furniture from areas to be abated and replacing the furniture when all work is done and the areas are cleared. Bidders may assume that most furniture can be moved manually with assistance of hand trucks. If systems furniture is involved, the additional labor involved to disconnect and reconnect the equipment and cubicles will be covered under the Labor Pool. For anticipated heavy warehouse equipment, the offeror may assume the use of forklifts for bidding purposes. Unusual circumstances involving specialized moving or lifting equipment would be covered under the Labor and Equipment Pools. For bidding purposes, offerors may assume that removal of office furniture and warehouse equipment will be performed on the same floor or level. If additional costs are involved because the furniture or equipment must be moved up or down staircases or elevators, then these costs will be covered under the appropriate Pools.

1.4.1.2 Measurement

The total quantity for which payment will be made will be the areas of space that are occupied by furniture or equipment that must be moved due to abatement requirements, as shown in the task order.

1.4.1.3 Unit of Measure

The unit required for payment of these items is square feet of area occupied by furniture or equipment.

1.4.2 Decontamination Facility (CLIN 0003)

1.4.2.1 Payment

Payment will be made for all costs associated with constructing and removing a temporary decon facility required to be connected to a building or building component prior to abatement. Costs will include framing, poly enclosure, development of the shower, equipment and clean rooms, doorways for ingress and egress and provisions for providing and maintaining negative air pressure within the building. As an alternative, bidders may want to consider the use of prefabricated ("popup") type enclosures, so long as the enclosures meet all safety and regulatory requirements. In addition, costs must be included for any additional requirements that may be contained within: OSHA Construction Safety Orders, Section 1529, Appendix F; 29 CFR 1910; and Section 13280, Paragraph 1.16.

1.4.2.2 Measurement

The quantity for which payment will be made for a decon facility will be lump sum, each setup.

1.4.2.3 Unit of Measure

The unit required for payment of this item is "each", reflecting each setup per building.

1.4.3 Poly Enclosures and Containment (CLIN's 0004AA-0004AC)

1.4.3.1 Payment

Payment will be made for all costs in association with acquisition, delivery and placement of polyethylene sheeting (6 mil), lumber and materials necessary to construct barriers to contain asbestos (or any hazardous material) laden areas or to protect areas from the abatement process. Placement of all barriers shall be in accordance with Section 13280, the Corps of Engineers' "Safety and Health Requirements Manual" ("Safety Manual"), and all federal and local laws and regulations. Costs included in CLIN 0004AA would cover the placement and removal of limited protection, such as poly over desks, furniture, floors, etc. or taping poly over windows, doors or any open area that does not

require full or limited containment. Costs included in CLIN 0004AB would include the construction and removal of full containment barriers, usually involving the complete sealing of the exterior of an entire building by using two layers of poly and positive means of fastening the poly to the building surface. Costs included in CLIN 0004AC would include the construction and removal of limited or partial containment barriers (such as dividing a room) that may include some framing, single layer of poly, taping and sealing.

1.4.3.2 Measurement

The quantity for which payment will be made for providing containment and protection will be the area covered by the containment.

1.4.3.3 Unit of Measure

The unit required for payment of these items is the square foot of area covered by the protection or containment. Limited containment (such as a wall dividing a room) would be measured by the square foot of wall installed.

1.4.4 Scaffolding (CLIN's 0005AA-0005AB)

1.4.4.1 Payment

Payment will be made for all costs associated with the delivery, setup and removal of scaffolding used to facilitate the abatement of hazardous materials. For high elevation scaffolding, costs should include whatever design may be necessary to assure that the scaffolding meets all safety requirements as outlined in Section 22 of the Safety Manual and applicable OSHA and local standards.

1.4.4.2 Measurement

The quantity for which payment will be made for scaffolding will be the vertical area covered by the scaffolding as projected against the wall or structure.

1.4.4.3 Unit of Measure

The unit required for payment of these items will be the square foot of projected vertical area.

1.4.5 Air Monitoring (CLIN 0006)

1.4.5.1 Payment

Payment will be made for all costs incurred for the services of an IH (or CIH) to provide continuous air

monitoring services during abatement activities. The costs would include all testing and mandatory activities as specified in Section 13280 and 29 CFR 1926.

1.4.5.2 Measurement

The quantity for which payment will be made for air monitoring will be the time required by the IH (or CIH) to monitor the abatement process specified in the task order.

1.4.5.3 Unit of Measure

The unit required for payment of air monitoring will be the hour.

1.4.6 Clearance Sampling/Testing (CLIN's 0007AA-0007AB)

1.4.6.1 Payment

Payment will be made for all costs associated with conducting transmission electron microscopy (TEM) and phase contrast microscopy (PCM) testing associated with abatement and clearance activities as outlined in Section 13280, 29 CFR 1926 and NIOSH-01 Methods 7402/7400. Costs should include the taking of samples or readings, mailing or delivery of samples (usually filters) to the laboratory, laboratory analysis (rush turnaround, 24 hours) and preparation of a short, numeric report showing test findings compared to EPA standards.

1.4.6.2 Measurement

The quantity for which payment would be made for sampling/testing will be lump sum for each sample taken during the work issued in the task order.

1.4.6.3 Unit of Measure

The unit required for payment of testing will be "each", lump sum for each sample/testing.

1.4.7 Abatement of Pipe Insulation in Containment (CLIN's 000AA-0008AF)

1.4.7.1 Payment

Payment will be made for all costs associated with the removal of pipe system insulation with ACM's within a containment area, all in accordance with Section 13280 and applicable federal and local regulations. Costs should include preparation, removal of insulation from the pipe system, and cleaning of the pipes. Costs for removing the abated insulation from the facility, transportation and disposal are

covered under CLIN's 0026, 0027 and 0028.

1.4.7.2 Measurement

The quantity for which payment would be made for removing insulation from piping systems is by the length of insulation removed within the diameter ranges given in the CLIN's.

1.4.7.3 Unit of Measure

The unit required for payment of pipe insulation removal is linear feet.

1.4.8 Abatement of Pipe and Pipe Joint Insulation by Glove Bag or Removal of Pipe (CLIN's 0009-0011)

1.4.8.1 Payment

Payment will be made for all costs associated with the removal of pipe and pipe joint insulation by glove bag or removal of the pipe and pipe joints when it is impractical to provide containment and negative air pressure. Costs should include preparation, removal and cleaning in accordance with Section 13280 and all federal and local regulations. Handling, transportation and disposal of the abated material is covered under CLIN's 0026, 0027 and 0028.

1.4.8.2 Measurement

Payment will be based upon the length of insulation removed, either by glove bag or physical removal of pipe.

1.4.8.3 Unit of Measure

The unit required for payment of these items of work is the linear foot.

1.4.9 Abate Spray-on Insulation and Overspray (CLIN's 0012-0013AC)

1.4.9.1 Payment

Payment will be made for all costs associated with the abatement of spray-on insulation and insulation overspray in accordance with Section 13280 and all applicable federal and local regulations. Costs should include preparation, removal and cleaning.

1.4.9.2 Measurement

Payment will be based upon either the area or length of insulation or overspray, depending upon the unit described within the CLIN's.

1.4.9.3 Unit of Measure

The unit required for payment of these items is either the square foot or linear foot.

1.4.10 Abate Ceilings (CLIN 0014AA-0014AB)

1.4.10.1 Payment

Payment will be made for all costs associated with the removal of suspended or solid ceilings that contain ACM's, all in accordance with Section 13280 and all applicable federal and local regulations. Cost should include preparation, removal and cleaning. If "hot" mastic is encountered while removing any solid (e.g., fiberboard) ceiling, the removal thereof would be covered under the applicable Pools. For suspended ceiling systems, costs for abatement would include any encountered insulation but would not include removal of the framing. However, if the framing is found to be damaged at the time of the jobwalk, then costs to remove the framing would be included in the applicable Pools, if deemed part of the scope of work for the task order.

1.4.10.2 Measurement

Payment will be based upon the area of ceiling removed.

1.4.10.3 Unit of Measure

The unit required for payment of these items is the square foot.

1.4.11 Abatement of Air Ducts and Mechanical Equipment (CLIN's 0015-0018)

1.4.11.1 Payment

Payment will be made for all costs associated with the removal of insulation with ACM's from air ducts (exterior and interior), flex joints, and hot water tanks and boilers, all in accordance with Section 13280 and federal and local regulations. Costs shall include preparation, abatement and cleaning.

1.4.11.2 Measurement

Payment for abatement of insulation on the exterior of air ducts and mechanical equipment will be based upon the area of insulation removed. Payment for abatement of the interior of air ducts will be measured in terms of the volume of air duct system that has to be cleaned. Removal of flex duct

joints will be paid by lump sum, each joint.

1.4.11.3 Unit of Measure

The unit required for payment of the removal of insulation on the exterior of air ducts and mechanical equipment will be the square foot. Payment of removal of ACM's within air ducts will be by the cubic foot of volume cleaned. The unit required to remove flex air duct joints will be "each", lump sum per joint.

1.4.12 Abatement of Non-friable ACM's (CLIN's 0019AA-0019AG)

1.4.12.1 Payment

Payment will be made for all costs associated with the abatement of flooring and subflooring, mastic on concrete and wood surfaces, siding and roofing, all in accordance with Section 13280 and applicable federal and local regulations. Abatement of roofing materials would include removal of the existing insulation layer. If the roof substrate is in poor condition, its removal would be covered under CLIN 0051. The unit price for removal of any resilient floor covering will be the same regardless of the number of layers of resilient flooring encountered. Costs shall include preparation (such as watering down the VAT), abatement and cleaning.

1.4.12.2 Measurement

Payment will be made based upon the area of flooring, siding and roofing abated and removed. For roofing, the area will be based upon the true (sloped) polygons, not as projected horizontally on a plan view.

1.4.12.3 Unit of Measure

The unit of measure required for payment of these items of work is the square foot.

1.4.13 Removal of Soil With ACM's (CLIN 0020)

1.4.13.1 Payment

Payment will be made for all costs associated with the removal of soil that has been identified with having ACM's, all in accordance with Sections 02111 and 13280 and applicable federal and local regulations. Costs should include preparation, removal of soil by hand up to a 4-inch depth, providing labelled containers and placing the soil into the containers. Disposal is covered under CLIN's 0026-0028.

1.4.13.2 Measurement

Payment will be made based upon the area of soil removed.

1.4.13.3 Unit of Measure

The unit of measure required for payment of this item is the square foot.

1.4.14 Abate Walls With ACM's (CLIN's 0021 & 0022)

1.4.14.1 Payment

Payment will be made for all costs associated with the removal of plaster and stucco walls in accordance with Section 13280 and applicable federal and local regulations. Costs should include removal of all materials down to the studs, such as wire mesh or lath.

1.4.14.2 Measurement

Payment will be made based upon the surface area of wall materials removed.

1.4.14.3 Unit of Measure

The unit of measure required for payment of this item is the square foot.

1.4.15 Abate and Replace Windows With ACM's (CLIN's 0023AA-0024)

1.4.15.1 Payment

Payment will be made for all costs associated with the removal and replacement of windows which contain ACM's (generally the caulking or mastic around the frames). Removal of materials with ACM's will be accomplished in accordance with Section 13280. Replacement of the windows will be in accordance with Section 08520. If extensive repairs must be made to the wall cavity for the new window, costs thereof will be covered under the appropriate Pools.

1.4.15.2 Measurement

Payment for these items will be based upon the size of window replaced or length of caulking joint removed.

1.4.15.3 Unit of Measure

The unit of measure required for replacement of windows (CLIN's 0023AA-0023AD) is square feet, while the unit of measure required for the removal of caulking with ACM's (CLIN 0024) is by the linear foot.

1.4.16 Apply Post Removal Encapsulant (Lockdown) After Abatement (CLIN 0025)

1.4.16.1 Payment

Payment will be made for the application of lockdown after abatement activities are done and the abated area has been cleared by the IH (CIH). Costs will include the preparation and application of lockdown in accordance with Section 13280 and applicable federal and local regulations.

1.4.16.2 Measurement

Payment for this item of work will be based upon the area receiving the lockdown material.

1.4.16.3 Unit of Measure

The unit of measure required for application of lockdown is the square foot.

1.4.17 Handling/Transportation/Disposal of ACM's (CLIN's 0026-0028)

1.4.17.1 Payment

Payment will be made for all activities required to prepare materials for transportation to the nearest approved disposal site, hauling and disposal at the site. Costs for handling should include provision of dumpsters, removing materials with ACM's from the areas being abated, sealing contaminated materials and placing into dumpsters, all in accordance with Sections 02120 and 13280 and applicable federal and local regulations. Costs for transportation of the hazardous materials should include the hauling in accordance with Section 13280, 40 CFR 61 and local regulations.
Costs for disposal of hazardous materials should include disposal fees incurred at an approved disposal site and the effort to offload the materials in accordance with 40 CFR 61 and local regulations.

1.4.17.2 Measurement

Payment of these items is based upon the volume of materials being disposed of and the distance from the jobsite to an approved landfill.

1.4.17.3 Unit of Measure

The unit of measure for handling and disposal costs is the cubic yard. The unit of measure for

transportation of the materials is the mile.

1.4.18 Sampling/Testing of Materials Containing LBP (CLIN's 0029AA-0029AC)

1.4.18.1 Payment

Payment will be made for all costs in association with the testing of materials containing lead-based paint (LBP) in accordance with Section 02090 and federal and local regulations. Costs shall include the taking of the sample, transportation to an approved laboratory, laboratory testing and preparation of brief test report that provides readings for the samples and compares the readings against EPA and HUD standards. Costs for air monitoring during abatement will be in association with the required presence of an IH (or CIH) and will be covered under CLIN 0006.

1.4.18.2 Measurement

Payment will be made for these items on the basis of each sample and associated test taken.

1.4.18.3 Unit of Measure

The unit of measure for these items will be "each", lump sum for each test/sample.

1.4.19 Removal and Replacement of Doors With LBP (CLIN's 0030AA-0030AB)

1.4.19.1 Payment

Payment will be made for all costs associated with the removal and disposal of existing wood doors with LBP and replacing with new doors. New wood doors will be provided in accordance with Section 08210. Bidders may assume hollow core doors are 3' 0" wide, 6' 8" high, 1¾" thick and made from Lauan. Variations from this configuration would be addressed in the appropriate Pools or a contract modification.

1.4.19.2 Measurement

Payment will be based upon the removal and replacement of a hollow core wooden door, complete, lump sum.

1.4.19.3 Unit of Measure

The unit of measure for these items of work will be "each", lump sum.

1.4.20 Abate Surfaces With LBP Through Encapsulation (CLIN's 0031AA-0031AH)

1.4.20.1 Payment

Payment will be made for all costs associated with the preparation of the surfaces to be encapsulated, in accordance with Section 02090 and application of the various coverings in accordance with technical specifications in Divisions 07 and 09. Specific materials, dimensions and types are provided in parenthesis so that bidders can provide a price for application of the specific encapsulant. However, because there are so many varieties of materials, variations in materials actually used in the task order will be addressed either through issuance of contract modifications or the applicable Pools.

1.4.20.2 Measurement

Payment will be made based upon the area of surface to be prepared and encapsulated.

1.4.20.3 Unit of Measure

The unit of measure for these items of work will be the square foot.

1.4.21 Abate LBP Surfaces by Chemical Stripping (CLIN's 0032AA-0032AC)

1.4.21.1 Payment

Payment will be made for all costs associated with the preparation and removal of LBP from walls, doors and windows (frames) by chemical stripping, all in accordance with Section 02090. Bidders may assume size of doors to be 3' 0"x6' 8" and windows to have wood frames, 4" wide, 4' 0"x7' 0". Variances within the task orders will be addressed through a contract modification or the applicable Pools.

1.4.21.2 Measurement

Payment will be made based on the area of wall to have LBP chemically removed and by the lump sum price covering chemical removal of LBP on doors and windows.

1.4.21.3 Unit of Measure

The unit of measure used as a basis for payment of these items is the square foot for walls and "each" for doors and windows.

1.4.22 Abate LBP Surfaces by Mechanical Means (CLIN's 0033AA-0033AF)

1.4.22.1 Payment

Payment will be made for all costs associated with the preparation and removal of LBP by mechanical means as specified in Section 02090 and applicable federal and local regulations.
For the removal of airfield striping with LBP, specific instructions will be provided within the task order. As a minimum, bidders should provide costs for this item (CLIN 0033AF) that are based upon the use of a machine that will not damage the airfield surface (asphalt or concrete) or change its surface texture. The machine should either include a vacuum device that removes the loose paint particles and immediately contains them, or the work should be followed up with a sweeper that has the capability of removing the paint particles and debris and providing a clean surface without FOD.

1.4.22.2 Measurement

Payment will be made based upon the area of LBP removed by mechanical means.

1.4.22.3 Unit of Measure

The unit of measure used as a basis for payment of these items is the square foot.

1.4.23 Removal of Soil Contaminated With Lead Materials (CLIN 0034)

1.4.23.1 Payment

Payment will be made for all costs associated with the preparation and removal of soil contaminated with lead materials, up to 4" deep, in accordance with Section 02111 and applicable federal, state and local regulations. Bidders may assume that all work would be done by hand and that costs should include provision of 55-gallon barrels or containers for the contaminated soil, plus placement of the contaminated soil into the barrels.

1.4.23.2 Measurement

The basis for measurement of this item will be the volume of contaminated soil removed.

1.4.23.3 Unit of Measure

The unit of measure for this item of work will be the cubic yard.

1.4.24 Handling/Transportation/Disposal of Abated LBP and Materials With Lead (CLIN's 0035-0039)

1.4.24.1 Payment

Payment will be made for all costs associated with the preparation of abated materials with lead and transportation and disposal at an approved landfill, all in accordance with Sections 02120 and 02090 and federal and local regulations. Costs for handling would include the temporary storage of 55 gallon barrels and loading the barrels into the vehicle used for hauling the barrels. Costs for transportation would include the hauling of the barrels from the jobsite to the nearest approved landfill. Costs for disposal of either liquid or solid waste would include the offloading of the barrels and disposal fees incurred at the landfill.

1.4.24.2 Measurement

The basis for measurement of these items would be based upon the volume of contaminated material handled and distance from the jobsite to the landfill.

1.4.24.3 Unit of Measure

The unit of measure for these items of work will be the number of 55-gallon drums for handling and disposal and mileage from the jobsite to the landfill.

1.4.25 Remove Lighting Ballasts With PCB's (CLIN's 0040-0041)

1.4.25.1 Payment

Payment will be made for all costs associated with preparation and the removal of ballasts with PCB's from lighting fixtures, all in accordance with Section 13286 and applicable federal and local regulations. Costs should include the placement of the ballasts into DOT approved containers.

1.4.25.2 Measurement

The basis for measurement of these items would be the volume of ballasts removed, as placed into containers, at an estimated number of 250 ballasts per barrel.

1.4.25.3 Unit of Measure

The unit of measure required for payment of these items is the standard "barrel" (U.S., 31½ gals, in accordance with DOT standards).

1.4.26 Remove PCB Spills (CLIN 0042)

1.4.26.1 Payment

Payment will be made for all costs associated with the preparation, provision of a spill kit and removal

of PCB spills on any surface, all in accordance with Section 13284 and applicable federal and local regulations. Costs should also include the provision of an approved waste container and disposal of saturated absorbent materials into the container.

1.4.26.2 Measurement

The basis for payment of this item will be the extent of the PCB spill.

1.4.26.3 Unit of Measure

The unit of measure for this item will be the square foot.

1.4.27 Remove Soil Contaminated With PCB's (CLIN 0043)

1.4.27.1 Payment

Payment will be made for all costs associated with preparation, excavation of the contaminated soil and placement into a temporary stockpile nearby the jobsite. Costs should include the temporary protection of the stockpile, such as using visqueen or other cover over the earth material. All work should be in accordance with Sections 02111 and 13285 and applicable federal and local regulations.

1.4.27.2 Measurement

The basis for payment of this item will be the weight of soil removed from the contaminated area.

1.4.27.3 Unit of Measure

The unit of measure for this item will be the U.S. ton.

1.4.28 Sampling/Testing for PCB's (CLIN 0044)

1.4.28.1 Payment

Payment will be made for all confirmation sampling and testing as required by the specifications, EPA standards and local regulations. Costs will include the taking of samples (soil or liquids), containerization of the samples, transportation to the laboratory, testing and provision of a brief report that compares the test results with EPA standards.

1.4.28.2 Measurement

Basis for payment of this item will be based upon each sample and test done.

1.4.28.3 Unit of Measure

The unit of measure for this item is “each”, representing one sample and subsequent test.

1.4.29 Handling/Transportation/Disposal of Materials With PCB’s (CLIN’s 0045-0048)

1.4.29.1 Payment

Payment will be made for all costs associated with the handling, transportation and disposal (incineration) of materials with PCB’s in accordance with Sections 02120, 13284, 13285 and 13286 and DOT regulations. Costs for handling would include the actions required to provide temporary storage and prepare and place containers into the transport vehicle; transportation would include the costs of delivering the PCB materials from the jobsite to the nearest approved incineration site; and disposal would include the costs for offloading PCB materials at the disposal site and paying disposal fees.

1.4.29.2 Measurement

Payment will be based upon the volume of PCB materials handled and disposed of.

1.4.29.3 Unit of Measure

The unit of measure for handling and disposal will be the barrel (U.S., 31½ gals, holding approx. 250 ballasts) for solids or gallons for liquids. The unit of measure for transportation of PCB contaminated materials is the mile.

1.4.30 Demolition of Building Components (CLIN’s 0049-0052)

1.4.30.1 Payment

Payment will be made for all costs associated with the demolition and disposal of building components that have been abated. Costs should include all preparation, dust control, demolition, provision of dumpsters, moving demolished materials to dumpsters or trucks, and site cleanup (not restoration), all in accordance with Section 02220 and federal and local regulations.

1.4.30.2 Measurement

Payment will be made based on the area of the materials being demolished. For CLIN 0049, the area measured would be total floor area removed.

1.4.30.3 Unit of Measure

The unit of measure for these items will be the square foot.

1.4.31 Break and Remove Reinforced Concrete (CLIN's 0053AA-0053AC)

1.4.31.1 Payment

Payment will be made for all costs associated with the breaking and removal of reinforced (rebar or welded wire mesh) concrete slabs or footings, all in accordance with Section 02220 and federal and local regulations. Costs should include preparation, dust control, demolition, provision of dumpsters, moving broken concrete debris to dumpsters or trucks, and site cleanup. CLIN 0053AC covers costs for excavation of earth material adjacent to footings, if required, and should include removal of the earth material, placement of the material alongside the footing excavation and replacement into the trench after demolition and removal of the footing. Minimal compaction of the earth material would be required and density requirements would be specified in the task order.

1.4.31.2 Measurement

Payment will be made based upon the volume of reinforced concrete or earth material removed.

1.4.31.3 Unit of Measure

The unit of measure for these items will be the cubic yard.

1.4.32 Remove Subflooring and Wall Materials (CLIN's 0054-0055)

1.4.32.1 Payment

Payment will be made for all costs associated with the removal of non-contaminated subflooring or wall materials in accordance with Section 02220. Costs should include preparation, dust control, provision of dumpsters or temporary storage facilities and removal and placement of demolished materials into the dumpsters.

1.4.32.2 Measurement

Payment will be made based upon the area of materials removed and disposed.

1.4.32.3 Unit of Measure

The unit of measure required for payment is the square foot.

1.4.33 Removal of Structures, Complete, Except for Foundation (CLIN's 0056AA-0056AC)

1.4.33.1 Payment

Payment will be made for all costs associated with the demolition of complete wood frame structures as identified in the CLIN entry and task order. Costs should include preparation, dust control, demolition, provision of dumpsters or temporary storage facilities, placement of demolished materials into the dumpsters, all in accordance with Section 02220.

1.4.33.2 Measurement

Payment for demolition will be based upon the building footprint area.

1.4.33.3 Unit of Measure

The unit of measure required for payment is the square foot.

1.4.34 Transportation/Disposal of Materials from Demolition Work (CLIN's 0057-0058)

1.4.34.1 Payment

Payment will be made for all costs associated with the hauling and disposal of non-contaminated materials from demolition work, all in accordance with federal and local regulations. Bidders should assume that the materials cannot be disposed on-Base and to use a 30-mile distance to the nearest approved landfill for bidding purposes. Costs for transportation should include loading the vehicle and operation of the vehicle to the landfill. Costs for disposal should include off-loading the materials at the landfill and the landfill fees.

1.4.34.2 Measurement

Payment for transportation and disposal of demolished materials will be by the volume of materials being demolished.

1.4.34.3 Unit of Measure

The unit of measure required for payment will be the cubic yard.

1.4.35 Perform Rough and Finish Carpentry (CLIN's 0059AA-0059AD)

1.4.35.1 Payment

Payment will be made for all costs in association with rough-in framing and finish work in accordance with Sections 06100, 06200 and 12320. Rough carpentry would include the framing of stud walls, ceilings, roof joists or floor system. Sheathing would include the placement of wood sheathing on either existing or new wall or roof frames. Bidders may assume use of ½" thick plywood, CDX grade. Finish carpentry would include the application of wood siding and similar exterior surfacing. Bidders may assume finished wood panelling, ¼" thick. Bidders may assume that cabinetry is 24" deep, 32" high, provided with all hardware and constructed with hardwood. Painting of cabinetry and casework would be covered by CLIN 0071AF. For other work, a modification would be issued to the contract according to the needs of the task order.

1.4.35.2 Measurement

Payment for CLIN's 0059AA, 0059AB and 0059AC will be based upon the area of rough-in, sheathing and finish carpentry. Payment for cabinetry will be based upon the footprint covered by the new work.

1.4.35.3 Unit of Measure

The unit of measure for these items is the square foot.

1.4.36 Replace Metal Roof and Siding (CLIN 0060)

1.4.36.1 Payment

Payment will be made for all costs associated with the application of sheetmetal roofing and siding, all in accordance with Sections 07412 and 07413 and the task order. Bidders may assume use of zinc-coated steel sheetmetal, 0.024" thick for roofing and siding, with final coating applied at the factory. Any requirements for underlayment, insulation or vapor barriers would be covered by a contract modification or the appropriate Pools. The intent of this CLIN entry is to replace roof sections or small roof areas; major roof replacement would be accomplished by others.

1.4.36.2 Measurement

Payment will be based upon the area covered by the sheetmetal work.

1.4.36.3 Unit of Measure

The unit of measure required for payment of this item is the square foot.

1.4.37 Perform Caulking and Sealing, General (CLIN 0061)

1.4.37.1 Payment

Payment will be made for all costs associated with the caulking and sealing of various surface interfaces and cracks (mostly windows and door frames), all in accordance with Section 07900. Bidders may assume use of silicone sealant, 30-year rating.

1.4.37.2 Measurement

Payment will be based upon the length of interface or cracks filled with sealant.

1.4.37.3 Unit of Measure

The unit of measure required for payment of this item is the linear foot.

1.4.38 Apply Stucco, 3 Coats (CLIN 0062)

1.4.38.1 Payment

Payment will be made for all costs associated with the application of a complete (three layer) stucco surfacing in accordance with Section 09225. Costs for new steel mesh (assume 1.8 lb/SF) nailed to an existing wood surface should be included. Any requirements for color, furring, sheathing, lath or vapor barrier would be covered by other CLIN's, contract modification or appropriate Pools.

1.4.38.2 Measurement

Payment will be based upon the area covered by the new stucco system.

1.4.38.3 Unit of Measure

The unit of measure required for payment of this item is the square foot.

1.4.39 Install New Doors, Interior/Exterior (CLIN's 0063AA-0063AF)

1.4.39.1 Payment

Payment will be made for all costs associated with the installation of new wood and steel doors in accordance with Sections 08210 and 08110. Bidders may assume that wood doors are 3' 0" wide, 6' 8" high and 1 ¾" thick. Bidders may also assume that steel doors are 3' 0" wide, 7' 0" high, Grade I, G60 galvanized, thermally insulated with factory finish, with steel frame having 6" channels. Costs should include all necessary hardware provided in accordance with Section 08700. Additional work, such as painting the doors, would be covered under other CLIN's or the appropriate Pools. This

CLIN entry should not be confused with CLIN's 0030AA and 0030AB, which call for replacement of doors with LBP.

1.4.39.2 Measurement

Payment would be based upon the installation of each door assembly as described in the CLIN entry or task order.

1.4.39.3 Unit of Measure

The unit of measure required for payment of these items is "each", per assembly installed.

1.4.40 Install Gypsum Wallboard (Drywall), Interior (CLIN's 0064AA-0064AB)

1.4.40.1 Payment

Payment will be made for all costs associated with the installation of drywall in accordance with Section 09250. Costs should include preparation, cutting, installation, nails or screws, taping and cleanup. If new wall or ceiling insulation is required because of the abatement work, costs for this item would be addressed through a contract modification or appropriate Pool.

1.4.40.2 Measurement

Payment will be based on the area of drywall installed.

1.4.40.3 Unit of Measure

The unit of measure required for payment of these items is the square foot.

1.4.41 Install Ceiling Systems (CLIN's 0065AA-0065AB)

1.4.41.1 Payment

Payment will be made for all costs associated with the installation of suspended ceilings and fixed ceilings in accordance with Section 09510 and the task order. Costs for suspended ceilings should include, for bidding purposes: frame, 2" carriers, 24" O.C. with 1½" channels, 24" O.C.; acoustical panels (2' x 4'), fiberglass, 5/8" thick, plain faced; support wires and anchors; and assumption that ceiling system would not be more than 8' above the floor and no more than 3' below the deck. For application of new ceiling tiles, bidders may assume that tiles will be cemented to an existing abated surface, 12" x 24" mineral fiber, vinyl coated, ¾" thick. For other ceiling systems and parameters, costs would be addressed in a contract modification or the requisite Pools.

1.4.41.2 Measurement

Payment will be based upon the area of ceiling installed.

1.4.41.3 Unit of Measure

The unit of measure required for payment of these items is the square foot.

1.4.42 Install Floor Coverings and Coving (CLIN's 0066AA-0066AG)

1.4.42.1 Payment

Payment will be made for all costs associated with the installation of various floor coverings in accordance with Sections 09310, 09650 and 09680. Bidders may assume use of CDX grade plywood for subflooring. For installation of ceramic tile, bidders may assume use of a mortar bed and mosaic tile, 2"x2", porcelain, polished. For installation of carpet, it is acknowledged that the varieties are endless. Costs shall include the installation of the carpet and backing. For the purposes of this CLIN entry, bidders may assume the following: tufted; broadloom; multilevel loop pile; branded commercial nylon continuous filament; pile height approximately 0.2 inch; gauge 1/12 inch; stitches and tufts, 144 per square inch; pile yarn weight 24 oz per SY; and pile density 5100; minimum usable carpet shall be 12 feet. Carpet backing can be assumed to have the following characteristics: 35.5 oz per SY; thickness approximately 0.15 inch; density 18.5 pounds per CF; and composed of a thermoplastic composite. For installation of coving, bidders may assume that coving shall be installed in accordance with Paragraph 3.10 of Section 09650; materials priced should include rubber, 4" high. Other variations for all the above materials shall be addressed in contract modifications or appropriate Pools.

1.4.42.2 Measurement

Payment for these items will be based either on the area covered or length of coving installed.

1.4.42.3 Unit of Measure

The unit of measure required for payment of the above items is either square foot or square yard (carpeting) and linear foot (coving).

1.4.43 Install Wall Coverings, Interior (CLIN's 0067AA-0067AD)

1.4.43.1 Payment

Payment will be made for all costs associated with the installation of various interior wall coverings in

accordance with Sections 09720, 09840, 09200 and 09310. Bidders may assume that wood paneling will be prefinished plywood, ¼" thick, 4' x 8' sheets with walnut grain. For application of gypsum plaster, 2 coats, prices shall not include installation of lath. Prices for application of ceramic tile shall include the mortar and use of glazed wall tile, 4¼" x 4¼". Other applications shall be covered by contract modifications or appropriate Pools.

1.4.43.2 Measurement

Payment for these items will be based upon the area covered by the materials.

1.4.43.3 Unit of Measure

The unit of measure required for payment of these items is the square foot, except that for gypsum plaster, the unit of measure will be the square yard.

1.4.44 Insulation of Hot and Cold Water Piping Systems (CLIN's 0068AA-0069BE)

1.4.44.1 Payment

Payment will be made for all costs associated with the installation of various types of insulation in accordance with Section 15080 and the task order. Bidders may assume use of aluminum for jackets. All work can be assumed to be for above ground facilities. Painting, if required, would be done in accordance with Section 09900 and would be covered by a contract modification or appropriate Pool.

1.4.44.2 Measurement

Payment would be based upon the length of piping or number of fittings insulated.

1.4.44.3 Unit of Measure

The unit of measure required for payment of these items is the linear foot or "each".

1.4.45 Insulation of Equipment, General and ACS Ductwork (CLIN's 0070AA-0070AE)

1.4.45.1 Payment

Payment will be made for all costs associated with the installation of various types of insulation in accordance with Section 15080 and the task order. Bidders may assume use of flexible mineral fiber material for hot water heaters. For additional work, such as painting the exterior of the insulation, modifications would be issued to the contract or costs would be included in the appropriate Pools.

1.4.45.2 Measurement

Payment will be based upon the area of equipment or ductwork covered by insulation.

1.4.45.3 Unit of Measure

The unit of measure required for payment of these items is the square foot.

1.4.46 Painting, General (CLIN's 0071AA-0071AK)

1.4.46.1 Payment

Payment will be made for all costs associated with the application of paint to various surfaces, trim and piping in accordance with Section 09900 and the task order. Costs should include preparation, application of the paint and cleanup. Bidders may assume that interior doors are 3' 0" wide by 6' 8" high. If significant repair work or preparation is required before painting can begin, costs for that work would be addressed in a contract modification, other CLIN entries, or the applicable Pools.

1.4.46.2 Measurement

Payment will be based upon the area of surfacing or length of trim and piping painted.

1.4.46.3 Unit of Measure

The unit of measure required for payment of these items is the square foot for areas covered, linear foot of trim painted and "each" for every door and window assembly done.

1.4.47 Landscaping, Import and Place Select Material (CLIN's 0072AA-0072AB)

1.4.47.1 Payment

Payment will be made for all costs associated with the importation and placement of select earth material at the site of a demolished building or area affected by the abatement process, all in accordance with Section 02300. Composition of the material will be provided in the task order. For bidding purposes, pricing may be based upon a source 30 miles from the jobsite, with the material being a sandy silt, free of large rocks and deleterious materials. Materials would be dumped at the site, spread to the required elevations and footprint, watered mainly for dust control and compacted only through normal use of the spreading equipment. Unusual situations, such as an "engineered fill", would be addressed through issuance of a contract modification or the appropriate Pools.

1.4.47.2 Measurement

Payment for this item would be based upon the volume of earth material delivered to the jobsite.

1.4.47.3 Unit of Measure

The unit of measure required for payment of this item is the cubic yard.

1.4.48 Landscaping, Installation of Irrigation Systems (CLIN's 0072AC-0072AJ)

1.4.48.1 Payment

Payment will be made for all costs associated with the installation of various irrigation system components in accordance with Section 02811 and the task order. For installation of piping, bidders may assume a depth of 12" for all sizes in average excavation conditions. Compaction of backfill would be by hand-held plate compactors to same density of in-situ soil. Sprinkler head assemblies would include two-way adjustable elbows to facilitate vertical alignment of head. Remote control valve assemblies with backflow preventer shall be priced using brass components. Bidders may assume that these assemblies shall be above ground. Underground conduit for control wiring (assume 4-#16 AWG wires in conduit) can be priced using a trench depth of 12" and compacted backfill. For additional fittings and work, such as specialized connections or valves and wiring to provide power to the irrigation system, costs would be addressed through issuance of contract modifications or the appropriate Pools.

1.4.48.2 Measurement

Payment for these items would be based upon the length of piping or conduit installed and number of assemblies and controllers placed.

1.4.48.3 Unit of Measure

The unit of measure required for payment of these items is the linear foot for pipe and conduit and "each" for various assemblies and controllers.

1.4.49 Landscaping, Soil Treatment, Hydroseeding and Placement of Sod (CLIN's 0072AK-0072AQ)

Payment will be made for all costs associated with the placement of topsoil, soil amendments, hydroseeding and sod in accordance with Sections 02300, 02921, 02922 and the task order. Bidders may assume that topsoil or sod would have to be hauled in from a location 30 miles from the jobsite. Costs for placement of topsoil would include dumping and spreading with limited compaction afforded through movement of the spreading equipment. Watering would be required, mainly for dust control. Also, the assumption can be made that soil amendments would consist a mixture of pH adjuster,

fertilizer, organic material (such as compost) and soil conditioner (such as sand). Sod shall be a minimum of 1**d**" thick, machine-cut, and bidders may assume use of "Marathon" type or equal for a semi-arid type environment. For hydroseeding and placement of sod, costs should include ground preparation (such as removal of stones and debris prior to placement), watering during placement and continued maintenance during an assumed establishment period of 90 calendar days. Costs for additional work requirements, such as mulching or spraying insecticides, would be covered by contract modifications or use would be made of the applicable Pools.

1.4.49.2 Measurement

Payment would be based upon the volume of topsoil delivered and area covered by the remaining items of work.

1.4.49.3 Unit of Measure

The unit of measure required for payment of these items is cubic yards for topsoil and square feet for the remainder of work items.

1.4.50 Landscaping, Plant Sprigs and Trees (CLIN's 0072AR-0072AX)

1.4.50.1 Payment

Payment will be made for all costs associated with the planting of sprigs and trees in accordance with Sections 02923 and 02930. Bidders may assume that sprigs and trees will have to be delivered from a nursery at a distance of at least 30 miles from the jobsite. Costs should include preparation of the ground, installation of the sprigs and trees, application of fertilizer and soil amendments, watering and maintenance of the plants for an assumed establishment period of 90 calendar days. Sprigs should be priced for species that are tolerant to a desert environment. Any additional work required, such as mulching, application of insecticides or provision of automatic watering systems, would be covered by other CLIN entries or contract modifications.

1.4.50.2 Measurement

Payment will be based upon the area covered by sprigs (at a density of 25/SY) and number of trees planted.

1.4.50.3 Unit of Measure

The unit of measure required for payment of these items is the square yard for sprigs and "each", the number of trees planted in accordance with the size shown on the CLIN entry.

1.4.51 Provide Access to ACS Components (CLIN's 0073AA-0073AE)

1.4.51.1 Payment

Payment will be made for all costs associated with the work required to gain access to ACS components through existing ductwork and ceilings. Costs should include cutting holes, removing ceiling tiles, installing steel covers and access doors with frames and replacing ceiling tiles. If new tiles are required, costs would be covered under another CLIN. Bidders may assume that the steel covers and doors are galvanized steel, insulated, with steel frames, installed in accordance with industry standards, local codes, SMACNA's HVAC "Duct Construction Standards" and the task order. Access doors placed in ceilings must be fire-rated. Any supplementary work required for these items would be covered by a contract modification or the appropriate Pools.

1.4.51.2 Measurement

Payment will be based upon the number of access doors installed, except for removal and replacement of ceiling tiles, which will be based upon the area of ceiling tiles affected.

1.4.51.3 Unit of Measure

The unit of measure required for payment of these items is "each" for access doors installed and square foot for ceiling tiles removed and replaced.

1.4.52 Remove and Replace Flex Duct (CLIN's 0074AB-0074AD)

1.4.52.1 Payment

Payment will be made for all costs associated with removing existing noncontaminated (no ACM's) flexible duct system components and replacing with new, insulated ductwork. Bidders may assume that new flexible duct will be coated fiberglass fabric on corrosion resistant metal helix with insulation being 1" thick with ¾" polyethylene jacket (¾ lb. rated). Costs should include connections. If additional work is required, such as re-installation of dampers and vents, costs will be covered by contract modifications or use of the applicable Pools.

1.4.52.2 Measurement

Payment will be based upon the length of flexible duct replaced in accordance with the size ranges shown in the CLIN entries.

1.4.52.3 Unit of Measure

The unit of measure required for payment of these items is the linear foot.

1.4.53 Clean Various ACS Devices, Units and Plenums (CLIN's 0074AA, 0074AE-0074AT)

1.4.53.1 Payment

Payment will be made for all costs associated with the cleaning of ACS components in accordance with NADCA Standard 1992-01, attached to this Section, applicable federal and local regulations and the task order. For CLIN 0074AA, bidders may assume an average size of 18" x 18". For CLIN's 0074AJ & 0074AK, bidders should include costs for cleaning the drain pans, assumed to be steel, 12" x 24", 1½" deep and drip lines. Cleaning of plenums would include the interior metal surfaces; if any equipment is involved in the plenum, costs for cleaning of the equipment would be covered under other CLIN entries or the applicable Pools. For CLIN entry 0074AT, bidders may assume use of a manlift or other safe means of dropping the worker into the plenum from above to afford cleaning.

1.4.53.2 Measurement

Payment for these items would be based upon the number of components cleaned as stipulated in the CLIN entries.

1.4.53.3 Unit of Measure

The unit of measure required for payment of the above items is "each".

1.4.54 Sanitize Cleaned ACS Components (CLIN 0074AU)

1.4.54.1 Payment

Payment will be made for all costs associated with the sanitization of cleaned ACS components in accordance with NADCA Standard 1992-01, applicable federal and local regulations and the task order. Costs should include application of an EPA approved sanitizer and visual inspections before and after application.

1.4.54.2 Measurement

Payment for this item would be based upon the areas sanitized within the ACS component or components.

1.4.54.3 Unit of Measure

The unit of measure required for payment of this item is the square foot.

1.4.55 Replace Air Filters and Frames (CLIN's 0075AA-0075AC)

1.4.55.1 Payment

Payment will be made for all costs associated with the replacement of existing in-line (within duct) air filters and frames (non-contaminated) with new electrostatic air filters and frames, all in accordance with industry standards, local codes and the task order. Air filter must be capable of removing particles as small as 0.3 micron and must be easily removed from frame for periodic cleaning. For especially difficult assemblies to replace, which may require the temporary removal and replacement of system components and associated supports, costs would be covered under the applicable Pools or a contract modification. The purpose of this CLIN entry is to provide a relatively maintenance-free filter assembly that improves air quality within a building at a higher rate of efficiency.

1.4.55.2 Measurement

Payment for these items would be based upon the number of filter assemblies replaced.

1.4.55.3 Unit of Measure

The unit of measure required for payment of these items is "each" in accordance with the ranges of sizes of filters shown in the CLIN entries.

1.4.56 Verification Testing of Cleaned ACS Components (CLIN's 0076AA-0076AC)

1.4.56.1 Payment

Payment will be made for all costs associated with the listed testing in accordance with the NADCA Standard 1992-01, NIOSH Manual of Analytical Methods and ASHRAE approved test methods. Costs should include preparation, conduct of the tests, provision of containers for samples (such as cassettes with filters), transportation of dust samples to an approved laboratory, laboratory analyses and a preparation of a brief report that compares the laboratory gravimetric analyses to NIOSH/EPA ACS cleaniness standards.

1.4.56.2 Measurement

Payment for these tests will be based upon the number of tests performed.

1.4.56.3 Unit of Measure

The unit of measure for these items will be "each".

1.4.57 Handling, Transportation and Disposal of Accumulated Debris (CLIN's 0077-0079)
1.4.57.1 Payment

Payment will be made for all costs in association with the handling of non-contaminated materials or components removed from air conveyance systems as a result of cleaning, their transportation to the nearest approved landfill and disposal. Costs for handling would include the placement of waste materials and their containers into temporary storage (dumpsters, etc.) and provision of temporary storage facilities. Transportation would include the cost of hauling the waste material to an approved landfill. Disposal costs would include the offloading of waste materials and paying the disposal fees.

1.4.57.2 Measurement

Payment would be based upon the volume of material removed from the jobsite due to ACS cleaning activities and the distance from the jobsite to the landfill.

1.4.57.3 Unit of Measure

The unit of measure required for payment of these items is the cubic yard for volume of materials disposed and mile for transportation of the waste materials.

1.4.58 Labor Pool (CLIN 0080AA)

1.4.58.1 Payment

The Labor Pool is established to cover the costs of labor associated with work that is not specifically addressed by the CLIN entries. Bidders should establish an average hourly labor rate, reflecting trades most likely to perform abatement and restoration work, adjusted to include fringes, all payroll taxes and insurance, general and administrative overhead, profit and bond premium. The hourly labor rate will be used in each task order as required, multiplied against the negotiated hours required for the task order, to establish the total labor cost for the work not identified in any CLIN entry. Bidders must ensure that they apply the proposed hourly labor rate against the total labor hours shown under CLIN 0080AA and include the total in their price for the Base and each Option Period.

1.4.58.2 Measurement

The quantity used for which work will be paid for the Labor Pool will be the total time negotiated for each task order.

1.4.58.3 Unit of Measure

The unit required for payment of this item is the hour.

1.4.59 Equipment Pool (CLIN 0080AB)

1.4.59.1 Payment

The Equipment Pool is established to cover the costs of equipment needed to perform work that is not addressed in any CLIN entry. Costs would be negotiated with each task order. The Contractor would be required to provide invoices to validate equipment rental rates or to provide a company equipment ownership and operating hourly rate price schedule. Operator labor costs could be included in the equipment costs if not covered in the Labor Pool. Bidders shall not include any cost or price in the Schedule of Services, Section 00010.

1.4.59.2 Measurement

The total quantity and cost of equipment will be negotiated and included in each task order.

1.4.59.3 Unit of Measure

The unit of measure for payment of this item will be a lump sum price per task order.

1.4.60 Material Pool (CLIN 0080AC)

1.4.60.1 Payment

The Material Pool is established to cover the costs of materials needed to perform work that is not addressed in any CLIN entry. Costs would be negotiated with each task order and would include the price of materials, including sales tax (if applicable) and delivery. Requirements for materials would be in the task order and specifications. Bidders shall not include any cost or price in the Schedule of Services, Section 00010.

1.4.60.2 Measurement

The total quantity and cost of materials will be included in each task order.

1.4.60.3 Unit of Measure

The unit of measure for payment of this item will be a lump sum price per task order.

1.4.61 Notification Fee (CLIN 0080AD)

1.4.61.1 Payment

This CLIN entry is established so that costs are covered for payment of mandatory notification fees imposed by the County or District Air Quality Control Board at the location of the work. Bidders shall not include any cost or price in the Schedule of Services, Section 00010.

1.4.61.2 Measurement

The fee amount will be included in each task order.

1.4.61.3 Unit of Measure

The unit required for payment of this item is a lump sum price per task order.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section 01270 --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION
1.2 SUBMITTAL CLASSIFICATION
1.2.1 Government Approved
1.2.2 Information Only
1.3 APPROVED SUBMITTALS
1.4 DISAPPROVED SUBMITTALS
1.5 WITHHOLDING OF PAYMENT

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL
3.2 SUBMITTAL REGISTER (ENG FORM 4288)
3.3 SCHEDULING
3.4 TRANSMITTAL FORM (ENG FORM 4025)
3.5 SUBMITTAL PROCEDURE
3.5.1 Procedures
3.5.2 Deviations
3.6 CONTROL OF SUBMITTALS
3.7 GOVERNMENT APPROVED SUBMITTALS
3.8 INFORMATION ONLY SUBMITTALS
3.9 STAMPS

-- End of Section Table of Contents --

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers as follows:

SD-01 Data

SD-04 Drawings

SD-06 Instructions

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any

error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor will also be given the submittal register files, containing the computerized ENG Form 4288 and instructions on the use of the files. These submittal register files will be furnished on a separate diskette. Columns "d" through "r" have been

completed by the Government; the Contractor shall complete columns "a" and "s" through "u" and submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 30 calendar days after Notice to Proceed. The Contractor shall keep this diskette up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

Six copies of submittals shall be submitted to the Contracting Officer at:

U.S. Army Corps of Engineers
High Desert Area Office
40015 N. Sierra Highway
Suite B-145
Palmdale, CA 93550

3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor

scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. 2 copies of the submittal will be retained by the Contracting Officer and 4 copies of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01351

SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST)

PART 1 GENERAL

1.1 REFERENCES
1.2 DESCRIPTION OF WORK
1.3 SUBMITTALS
1.4 REGULATORY REQUIREMENTS
1.5 PRECONSTRUCTION SAFETY CONFERENCE
1.6 SAFETY AND HEALTH PROGRAM
1.7 SITE SAFETY AND HEALTH PLAN
1.7.1 Preparation and Implementation
1.7.2 Acceptance and Modifications
1.7.3 Availability
1.7.4 Elements
1.8 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION
1.8.1 Project/Site Conditions
1.8.1.1 Site Information
1.8.1.2 List of Available Documents
1.8.2 Plan Requirements
1.8.3 Ordnance and Explosive Waste (OEW)
1.9 HAZARD/RISK ANALYSIS
1.9.1 Site Tasks and Operations (Workplan)
1.9.2 Hazards
1.9.2.1 Safety Hazards
1.9.2.2 Chemical Hazards
1.9.2.3 Physical Agents
1.9.2.4 Radiological Hazards
1.9.2.5 Biological Hazards
1.9.3 Action Levels
1.9.3.1 General Requirements
1.9.3.2 Confined Space Entry
1.10 ACTIVITY HAZARD ANALYSES
1.11 STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES
1.11.1 Site Superintendent
1.11.2 Safety and Health Manager
1.11.2.1 Qualifications
1.11.2.2 Responsibilities
1.11.3 Site Safety and Health Officer (SSHO)
1.11.3.1 Qualifications of SSHO
1.11.3.2 Responsibilities of SSHO
1.11.4 Occupational Physician (OP)
1.11.4.1 Qualifications of OP
1.11.4.2 Responsibilities of OP
1.11.5 Persons Certified in First Aid and CPR
1.11.6 Safety and Health Technicians
1.11.7 Certified Health Physicist (CHP)
1.11.8 Certified Safety Professional (CSP)

1.12 TRAINING
1.12.1 General Hazardous Waste Operations Training
1.12.2 Site-specific Training
1.12.2.1 Initial Session (Pre-entry Briefing)
1.12.2.2 Periodic Sessions
1.12.2.3 Other Training
1.13 PERSONAL PROTECTIVE EQUIPMENT
1.13.1 PPE Program
1.13.2 Levels of Protection
1.13.2.1 Components of Levels of Protection
1.13.2.2 Initial Minimum Levels of PPE by Task
1.13.3 PPE for Government Personnel
1.14 MEDICAL SURVEILLANCE
1.14.1 Frequency of Examinations
1.14.2 Content of Examinations
1.14.3 Information Provided to the Occupational Physician
1.14.4 Physician's Written Opinion
1.14.5 Medical Records
1.15 RADIATION DOSIMETRY
1.15.1 Evaluation
1.15.2 Documentation
1.15.3 Bioassay
1.15.4 Reporting
1.16 EXPOSURE MONITORING/AIR SAMPLING PROGRAM
1.17 HEAT AND COLD STRESS MONITORING
1.17.1 Heat Stress
1.17.2 Cold Stress
1.18 SAFETY PROCEDURES, ENGINEERING CONTROLS AND WORK PRACTICES
1.18.1 General Site Rules/Prohibitions
1.18.2 Work Permit Requirements
1.18.3 Material Handling Procedures
1.18.3.1 Spill and Discharge Control
1.18.3.2 Materials Transfer Safety
1.18.4 Drum and Container Handling
1.18.5 Confined Space Entry Procedures
1.18.6 Hot Work
1.18.7 Ignition Sources
1.18.8 Fire Protection and Prevention
1.18.9 Electrical Safety
1.18.10 Excavation and Trench Safety
1.18.11 Guarding of Machinery and Equipment
1.18.12 Lockout/Tagout
1.18.13 Fall Protection
1.18.14 Hazard Communication
1.18.15 Illumination
1.18.16 Sanitation
1.18.17 Engineering Controls
1.18.18 Process Safety Management
1.18.19 Signs and Labels
1.18.20 Waste Disposal
1.18.21 Tank Purging for Permit-Required Confined Space Entries
1.18.22 Tank Inerting (No Entry)
1.18.23 Tank Atmosphere Testing
1.18.23.1 Monitoring to Ensure Purging
1.18.23.2 Monitoring to Ensure Inerting
1.18.24 Tank Lifting
1.18.25 Tank Demolition
1.18.26 Tank Cleaning
1.19 SITE CONTROL MEASURES

1.19.1 Work Zones
1.19.2 Site Control Log
1.19.3 Communication
1.19.4 Site Security
1.20 PERSONAL HYGIENE AND DECONTAMINATION
1.20.1 Decontamination Facilities
1.20.2 Procedures
1.21 EQUIPMENT DECONTAMINATION
1.21.1 Decontamination Facilities
1.21.2 Procedures
1.22 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS
1.23 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES
1.24 CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT
1.25 INSPECTIONS
1.26 SAFETY AND HEALTH PHASE-OUT REPORT

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01351

SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST)

PART 1 GENERAL1.1 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 CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH Threshold Limits	(1998) Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z358.1	(1990) Emergency Eyewash and Shower Equipment

AMERICAN PETROLEUM INSTITUTE (API)

API Publ 2219	(1986) Safe Operation of Vacuum Trucks in Petroleum Service
API RP 1604	(1996) Closure Underground Petroleum Storage Tanks
API Std 2015	(1994) Safe Entry and Cleaning of Petroleum Storage Tanks

CODE OF FEDERAL REGULATIONS (CFR)

10 CFR 20	Standards for Protection Against Radiation
29 CFR 1904	Recording and Reporting Occupational Injuries and Illnesses
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

ENGINEERING MANUALS (EM)

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

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 85-115	(1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

1.2 DESCRIPTION OF WORK

This section provides additional requirements for implementing the accident prevention provisions of EM 385-1-1, and specifies a Site Safety and Health Plan (SSHP) which shall satisfy the requirements for submission of a separate Accident Prevention Plan (APP) as required by EM 385-1-1. The requirements shall apply to work performed in both "contaminated" and "clean" areas.

1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Work Zones; GA.

Drawings shall include initial work zone boundaries: Exclusion Zone (EZ), including restricted and regulated areas; Contamination Reduction Zone (CRZ); and Support Zone (SZ).

Decontamination Facilities; GA.

Drawings shall show the layout of the personnel and equipment decontamination areas or facilities.

SD-09 Reports

Monitoring/Sampling Results; GA.

Personnel exposure monitoring/sampling results.

Site Control Log; GA.

Record of each entry and exit into the site, as specified.

1.4 REGULATORY REQUIREMENTS

Work performed under this contract shall comply with EM 385-1-1, applicable Federal, state, and local safety and occupational health laws and regulations. This includes, but is not limited to, Occupational Safety and Health Administration (OSHA) standards, 29 CFR 1910, especially Section .120, "Hazardous Waste Site Operations and Emergency Response" and 29 CFR 1926, especially Section .65, "Hazardous Waste Site Operations and Emergency Response". Matters of interpretation of standards shall be submitted 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 PRECONSTRUCTION SAFETY CONFERENCE

Specific requirements as required by the Task Order.

1.6 SAFETY AND HEALTH PROGRAM

OSHA Standards 29 CFR 1910, Section .120 (b) and 29 CFR 1926, Section .65 (b) require employers to develop and implement a written Safety and Health Program for employees involved in hazardous waste operations. The site-specific program requirements of the OSHA Standards shall be integrated into one site-specific document, the Site Safety and Health Plan (SSHP). The SSHP shall interface with the employer's overall Safety and Health Program. Any portions of the overall Safety and Health Program that are referenced in the SSHP shall be included as appendices to the SSHP.

1.7 SITE SAFETY AND HEALTH PLAN

1.7.1 Preparation and Implementation

A Site Safety and Health Plan (SSHP) shall be prepared covering onsite work to be performed by the Contractor and all subcontractors. The Safety and Health Manager shall be responsible for the development, implementation and oversight of the SSHP. The SSHP shall establish, in detail, the protocols necessary for the anticipation, recognition, evaluation, and control of hazards associated with each task performed. The SSHP shall address site-specific safety and health requirements and procedures based upon site-specific conditions. The level of detail provided in the SSHP shall be tailored to the type of work, complexity of operations to be performed, and hazards anticipated. Details about some activities may not be available when the initial SSHP is prepared and submitted. Therefore, the SSHP shall address, in as much detail as possible, anticipated tasks, their related hazards and anticipated control measures. Additional details shall be included in the activity hazard analyses as described in paragraph ACTIVITY HAZARD ANALYSES.

1.7.2 Acceptance and Modifications

Prior to submittal, the SSHP shall be signed and dated by the Safety and Health Manager and the Site Superintendent. The SSHP shall be submitted for review 30 days prior to the Preconstruction Safety Conference. Deficiencies in the SSHP will be discussed at the preconstruction safety conference, and the SSHP shall be revised to correct the deficiencies and resubmitted for acceptance. Onsite work shall not begin until the plan has been accepted. A copy of the written SSHP shall be maintained onsite. As work proceeds, the SSHP shall be adapted to new situations and new conditions. Changes and modifications to the accepted SSHP shall be made with the knowledge and concurrence of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer. Should any unforeseen hazard become evident during the performance of the work, the Site Safety and Health Officer (SSHO) shall bring such hazard to the attention of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, necessary action shall be taken to re-establish and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Disregard for the provisions of this specification or the accepted SSHP shall be cause for stopping of work

until the matter has been rectified.

1.7.3 Availability

The SSHP shall be made available in accordance with 29 CFR 1910, Section .120 (b)(1)(v) and 29 CFR 1926, Section .65 (b)(1)(v).

1.7.4 Elements

Topics required by 29 CFR 1910, Section .120 (b)(4) 29 CFR 1926, Section .65 (b)(4) and the Accident Prevention Plan as described in Appendix A of EM 385-1-1 and those described in this section shall be addressed in the SSHP. Where the use of a specific topic is not applicable to the project, the SSHP shall include a statement to justify its omission or reduced level of detail and establish that adequate consideration was given the topic.

1.8 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION

1.8.1 Project/Site Conditions

The following information is a record of site contaminants and a description of the site. This information is provided to assist in preparing the SSHP. Additional sources of information are available as listed below.

1.8.1.1 Site Information

The underground storage tanks addressed by this project have been confirmed as having contained materials as defined by the Task Order.

1.8.1.2 List of Available Documents

Further information is available from the Contracting Officer.

1.8.2 Plan Requirements

The SSHP shall include a site description and contamination characterization section that addresses the following elements:

a. Description of site location, topography, size and past uses of the site.

b. A list of contaminants which may present occupational health and safety hazards. This list shall be created by evaluating the analytical results in this section and by researching sources of information from past site investigation activities. Chemical names, concentration ranges, media in which found, locations onsite, and estimated quantities/volumes to be impacted by site work shall be included if known. The contamination characterization shall be reviewed and revised if new chemicals are identified as work progresses.

1.8.3 Ordnance and Explosive Waste (OEW)

If explosives, chemical surety and warfare materials (CSM/CWM), or unexploded ordnance (UXO) are discovered at any time during operations, the Contractor shall immediately stop operations in the affected area, mark the location, notify onsite personnel of the OEW hazard and the area's restrictions, and notify the Contracting Officer. The Government will make appropriate arrangements for evaluation and proper disposal of each device.

The SSHP shall specifically address procedures to be followed, if known or potential CSM/CWM, ordnance, or other such items are encountered during any phase of field work.

1.9 HAZARD/RISK ANALYSIS

The SSHP shall include a safety and health hazard/risk analysis for each site task and operation to be performed. The hazard/risk analysis shall provide information necessary for determining safety and health procedures, equipment, and training to protect onsite personnel, the environment, and the public. Available site information shall be reviewed when preparing the "Hazard/Risk Analysis" section of the SSHP. The following elements, at a minimum, shall be addressed.

1.9.1 Site Tasks and Operations (Workplan)

The SSHP shall include a comprehensive section that addresses the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives. Based on the type of remediation required, the following is a list of anticipated major site tasks and operations to be performed: as defined by the Task Order. This is not a complete list of site tasks and operations; therefore, it shall be expanded and/or revised, during preparation of the SSHP as necessary.

1.9.2 Hazards

The following potential hazards may be encountered during site work. These are not complete lists; therefore, they shall be expanded and/or revised as necessary during preparation of the SSHP.

1.9.2.1 Safety Hazards

As required by the Task Order.

1.9.2.2 Chemical Hazards

Potential chemical hazards that may be encountered during site work are discussed in paragraph SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION. The Hazard/Risk Analysis section of the SSHP shall describe the chemical, physical, and toxicological properties of contaminants, sources and pathways of employee exposures, anticipated onsite and offsite exposure level potentials, and regulatory (including Federal, state, and local) or recommended protective exposure standards. The SSHP shall also address employee exposure to hazardous substances brought onsite, and shall comply with the requirements of 29 CFR 1910, Section .1200 and 29 CFR 1926, Section .59, Hazard Communication.

1.9.2.3 Physical Agents

As defined by the Task Order.

1.9.2.4 Radiological Hazards

As defined by the Task Order.

1.9.2.5 Biological Hazards

As defined by the Task Order.

1.9.3 Action Levels

1.9.3.1 General Requirements

Action levels shall be established for the situations listed below, at a minimum. The action levels and required actions (engineering controls, changes in PPE, etc.) shall be presented in the SSHP in both text and tabular form.

a. Implementation of engineering controls and work practices.

b. Upgrade or downgrade in level of personal protective equipment.

c. Work stoppage and/or emergency evacuation of onsite personnel.

d. Prevention and/or minimization of public exposures to hazards created by site activities.

1.9.3.2 Confined Space Entry

Entry into and work in a confined space will not be allowed when oxygen readings are less than 19.5% or greater than 23.5% or if the Lower Flammable Limit (LFL) reading is greater than 10%, unless these conditions are adequately addressed in the confined space entry program. In addition, action levels for toxic atmospheres shall be determined.

1.10 ACTIVITY HAZARD ANALYSES

Prior to beginning each major phase of work, an Activity Hazard Analysis shall be prepared by the Contractor performing that work and submitted for review and acceptance. The format shall be in accordance with EM 385-1-1, figure 1-1. A major phase of work is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform. The analysis shall define the activities to be performed and identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the activity hazard analysis has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the government onsite representatives. The activity hazard analyses shall be continuously reviewed and when appropriate modified to address changing site conditions or operations, with the concurrence of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer. Activity hazard analyses shall be attached to and become a part of the SSHP.

1.11 STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

An organizational structure shall be developed that sets forth lines of authority (chain of command), responsibilities, and communication procedures concerning site safety, health, and emergency response. This organizational structure shall cover management, supervisors and employees of the Contractor and subcontractors. The structure shall include the means for coordinating and controlling work activities of subcontractors and suppliers. The SSHP shall include a description of this organizational structure as well as qualifications and responsibilities of each of the following individuals. The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the Safety and Health Staff.

Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

1.11.1 Site Superintendent

A Site Superintendent, who has responsibility to implement the SSHP, the authority to direct work performed under this contract and verify compliance, shall be designated.

1.11.2 Safety and Health Manager

1.11.2.1 Qualifications

The services of an Industrial Hygienist certified by the American Board of Industrial Hygiene or a safety professional certified by the Board of Certified Safety Professionals, as required by the Task Order, shall be utilized. The name, qualifications (education summary and documentation, ABIH or BCSP certificate), and work experience summary shall be included in the SSHP. The Safety and Health Manager shall have the following additional qualifications:

a. A minimum of 3 years experience in developing and implementing safety and health programs in the hazardous waste disposal industry.

b. Documented experience in supervising professional and technician level personnel.

c. Documented experience in developing worker exposure assessment programs and air monitoring programs and techniques.

d. Documented experience in the development of personal protective equipment programs, including programs for working in and around potentially toxic, flammable and combustible atmospheres and confined spaces.

e. Working knowledge of state and Federal occupational safety and health regulations.

1.11.2.2 Responsibilities

The Safety and Health Manager shall:

a. Be responsible for the development, implementation, oversight, and enforcement of the SSHP.

b. Sign and date the SSHP prior to submittal.

c. Conduct initial site-specific training.

d. Be present onsite during the first 3 days of remedial activities and at the startup of each new major phase.

e. Visit the site as needed and at least once per month for the duration of activities, to audit the effectiveness of the SSHP.

f. Be available for emergencies.

g. Provide onsite consultation as needed to ensure the SSHP is fully implemented.

h. Coordinate any modifications to the SSHP with the Site Superintendent, the SSHO, and the Contracting Officer.

i. Provide continued support for upgrading/downgrading of the level of personal protection.

j. Be responsible for evaluating air monitoring data and recommending changes to engineering controls, work practices, and PPE.

k. Review accident reports and results of daily inspections.

l. Serve as a member of the Contractor's quality control staff.

1.11.3 Site Safety and Health Officer (SSHO)

1.11.3.1 Qualifications of SSHO

An individual and one alternate shall be designated the Site Safety and Health Officer (SSHO). The name, qualifications (education and training summary and documentation), and work experience of the Site Safety and Health Officer and alternate shall be included in the SSHP. The SSHO shall have the following qualifications:

a. A minimum of 2 years experience in implementing safety and health programs in the hazardous waste disposal industry where Level B or Level C personal protective equipment was required.

b. Documented experience in construction techniques and construction safety procedures.

c. Working knowledge of Federal and state occupational safety and health regulations.

d. Specific training in personal and respiratory protective equipment program implementation, confined space program oversight, and in the proper use of air monitoring instruments, and air sampling methods including monitoring for ionizing radiation.

1.11.3.2 Responsibilities of SSHO

The Site Safety and Health Officer shall:

a. Assist and represent the Safety and Health Manager in onsite training and the day to day onsite implementation and enforcement of the accepted SSHP.

b. Be assigned to the site on a full time basis for the duration of field activities. The SSHO shall have no duties other than Safety and Health related duties. If operations are performed during more than 1 work shift per day, a site Safety and Health Officer shall be present for each shift and act as the radiation safety officer (RSO) as defined in paragraph 06.E.02 of EM 385-1-1 on radioactive waste cleanup projects.

c. Have authority to ensure site compliance with specified safety and health requirements, Federal, state and OSHA regulations and all aspects of the SSHP including, but not limited to, activity hazard analyses, air monitoring, monitoring for ionizing radiation, use of PPE, decontamination, site control, standard operating procedures used to minimize hazards, safe

use of engineering controls, the emergency response plan, confined space entry procedures, spill containment program, and preparation of records by performing a daily safety and health inspection and documenting results on the Daily Safety Inspection Log.

d. Have authority to stop work if unacceptable health or safety conditions exist, and take necessary action to re-establish and maintain safe working conditions.

e. Consult with and coordinate any modifications to the SSHP with the Safety and Health Manager, the Site Superintendent, and the Contracting Officer.

f. Serve as a member of the Contractor's quality control staff on matters relating to safety and health.

g. Conduct accident investigations and prepare accident reports.

h. Review results of daily quality control inspections and document safety and health findings into the Daily Safety Inspection Log.

i. In coordination with site management and the Safety and Health Manager, recommend corrective actions for identified deficiencies and oversee the corrective actions.

1.11.4 Occupational Physician (OP)

1.11.4.1 Qualifications of OP

The services of a licensed physician, who is certified in occupational medicine by the American Board of Preventative Medicine, or who, by necessary training and experience is Board eligible, shall be utilized. The physician shall be familiar with this site's hazards and the scope of this project. The medical consultant's name, qualifications, and knowledge of the site's conditions and proposed activities shall be included in the SSHP.

1.11.4.2 Responsibilities of OP

The physician shall be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1910, Section .120 (f) and 29 CFR 1926, Section .65 (f) and paragraph MEDICAL SURVEILLANCE.

1.11.5 Persons Certified in First Aid and CPR

At least two persons who are currently certified in first aid and CPR by the American Red Cross or other approved agency shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030. These persons may perform other duties but shall be immediately available to render first aid when needed.

1.11.6 Safety and Health Technicians

For each work crew in the exclusion zone, one person, designated as a Safety and Health technician, shall perform activities such as air monitoring, decontamination, and safety oversight on behalf of the SSHO. They shall have appropriate training equivalent to the SSHO in each

specific area for which they have responsibility and shall report to and be under the supervision of the SSHO.

1.11.7 Certified Health Physicist (CHP)

The services of a health physicist certified by the American Board of Health Physics shall be utilized. The CHP shall report to the Safety and Health Manager.

1.11.8 Certified Safety Professional (CSP)

The services of a safety professional certified by the Board of Certified Safety Professionals shall be utilized. The CSP shall report to the Safety and Health Manager.

1.12 TRAINING

Personnel shall receive training in accordance with the Contractor's written safety and health training program and 29 CFR 1910 Section .120, 29 CFR 1926 Section .65, and 29 CFR 1926 Section .21. The SSHP shall include a section describing training requirements.

1.12.1 General Hazardous Waste Operations Training

Personnel entering the exclusion or contamination reduction zones shall have successfully completed 40 hours of hazardous waste instruction off the site; 3 days actual field experience under the direct supervision of a trained, experienced supervisor; and 8 hours refresher training annually. Onsite supervisors shall have completed the above training and 8 hours of additional, specialized training covering at least the following topics: the employer's safety and health program, personal protective equipment program, spill containment program, and health hazard monitoring procedures and techniques. Copies of current training certification statements shall be submitted prior to initial entry onto the work site.

1.12.2 Site-specific Training

Site-specific training sessions shall be documented in accordance with Section 01.B.03.b of EM 385-1-1.

1.12.2.1 Initial Session (Pre-entry Briefing)

Prior to commencement of onsite field activities, all site employees, including those assigned only to the Support Zone, shall attend a site-specific safety and health training session of at least 4 hours duration. This session shall be conducted by the Safety and Health Manager and the Site Safety and Health Officer to ensure that all personnel are familiar with requirements and responsibilities for maintaining a safe and healthful work environment. Procedures and contents of the accepted SSHP and Sections 01.B.02 and 28.D.03 of EM 385-1-1 shall be thoroughly discussed. The Contracting Officer shall be notified at least 5 days prior to the initial site-specific training session so government personnel involved in the project may attend.

1.12.2.2 Periodic Sessions

Periodic onsite training shall be conducted by the SSHO at least weekly for personnel assigned to work at the site during the following week. The

training shall address safety and health procedures, work practices, any changes in the SSHP, activity hazard analyses, work tasks, or schedule; results of previous week's air monitoring, review of safety discrepancies and accidents. Should an operational change affecting onsite field work be made, a meeting prior to implementation of the change shall be convened to explain safety and health procedures. Site-specific training sessions for new personnel, visitors, and suppliers shall be conducted by the SSHO using the training curriculum outlines developed by the Safety and Health Manager.

1.12.2.3 Other Training

The Safety and Health Manager shall provide training as specified by 29 CFR 1910 Section .146, for employees who are required to supervise, standby, or enter permit-required confined spaces. Persons involved in any aspect of the transportation of hazardous materials shall be trained in accordance with 49 CFR 172 Subpart H.

1.13 PERSONAL PROTECTIVE EQUIPMENT

1.13.1 PPE Program

In accordance with 29 CFR 1910 Section .120 (g)(5) and 29 CFR 1926Section .65 (g)(5), a written Personal Protective Equipment (PPE) program which addresses the elements listed in that regulation, and which complies with respiratory protection program requirements of 29 CFR 1910 Section .134, is to be included in the employer's Safety and Health Program. The Site Safety and Health Plan shall detail the minimum PPE ensembles (including respirators) and specific materials from which the PPE components are constructed for each site-specific task and operation to be performed, based upon the hazard/risk analysis. Components of levels of protection (B, C, D and modifications) must be relevant to site-specific conditions, including heat and cold stress potential and safety hazards. Only respirators approved by NIOSH shall be used. Onsite personnel shall be provided with appropriate personal protective equipment. Protective equipment and clothing shall be kept clean and well maintained. The PPE section of the SSHP shall include site-specific procedures to determine PPE program effectiveness and for onsite fit-testing of respirators, cleaning, maintenance, inspection, and storage of PPE.

1.13.2 Levels of Protection

The Safety and Health Manager shall establish appropriate levels of protection for each work activity based on review of historical site information, existing data, an evaluation of the potential for exposure (inhalation, dermal, ingestion, and injection) during each task, past air monitoring results, and a continuing safety and health monitoring program. The Safety and Health Manager shall also establish action levels for upgrade or downgrade in levels of PPE from the following specified minimum levels of protection. Protocols and the communication network for changing the level of protection shall be described in the SSHP. The PPE reassessment protocol shall address air monitoring results, potential for exposure, changes in site conditions, work phases, job tasks, weather, temperature extremes, individual medical considerations, etc.

1.13.2.1 Components of Levels of Protection

The following items constitute minimum protective clothing and equipment ensembles to be utilized during this project: as required by the Task Order

1.13.2.2 Initial Minimum Levels of PPE by Task

Based on available information, the initial minimum protective equipment requirements for each major task and operation are listed below. Available site information shall be reviewed and the list of tasks and operations and these levels of protection shall be expanded and/or revised during preparation of the SSHP.

MINIMUM PROTECTIVE EQUIPMENT REQUIREMENTS

TASK/OPERATION	INITIAL LEVEL OF PROTECTION
All	As required by the Task Order

1.13.3 PPE for Government Personnel

Three clean sets of personal protective equipment and personal dosimeters for work on radioactive waste cleanup sites and clothing (excluding air-purifying negative-pressure respirators and safety shoes, which will be provided by individual visitors), as required for entry into the Exclusion Zone and/or Contamination Reduction Zone, shall be available for use by the Contracting Officer or official visitors. The items shall be cleaned and maintained by the Contractor and stored in the clean room of the decontamination facility and clearly marked: "FOR USE BY GOVERNMENT ONLY." The Contractor shall provide basic training in the use and limitations of the PPE provided, and institute administrative controls to check prerequisites prior to issuance. Such prerequisites include meeting minimum training requirements for the work tasks to be performed and medical clearance for site hazards and respirator use.

1.14 MEDICAL SURVEILLANCE

The Safety and Health Manager, in conjunction with the Occupational Physician, shall detail, in the employer's Safety and Health Program and the SSHP, the medical surveillance program that includes scheduling of examinations, certification of fitness for duty, compliance with OSHA requirements, and information provided to the physician. Examinations shall be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and shall be provided without cost to the employee, without loss of pay and at a reasonable time and place. Medical surveillance protocols and examination and test results shall be reviewed by the Occupational Physician. The medical surveillance program shall contain the requirements specified below. Personnel working in contaminated areas of the site shall have been examined as prescribed in 29 CFR 1910 Section .120, and 29 CFR 1926Section .65, and determined medically fit to perform their duties.

1.14.1 Frequency of Examinations

Employees shall have been provided with medical examinations as specified, within the past 12 months and shall receive exams annually thereafter (if contract duration exceeds 1 year); on termination of employment; reassignment in accordance with 29 CFR 1910 Section .120 (f)(3)(i), and 29 CFR 1926 Section .65 (f)(3)(i)(C); if the employee develops signs or symptoms of illness related to workplace exposures; if the physician determines examinations need to be conducted more often than once a year; and when an employee develops a lost time injury or illness during the period of this contract. The supervisor shall be provided with a written

statement signed by the physician prior to allowing the employee to return to the work site after injury or illness resulting in a lost workday, as defined in 29 CFR 1904 Section .12 (f).

1.14.2 Content of Examinations

The following elements shall be included in the medical surveillance program. Additional elements may be included at the discretion of the occupational physician responsible for reviewing the medical surveillance protocols.

a. Complete medical and occupational history (initial exam only).

b. General physical examination of major organ systems.

c. Pulmonary function testing including FVC and FEV1.0.

d. CBC with differential.

e. Blood chemistry screening profile (e.g. SMAC 20/25).

f. Urinalysis with microscopic examination.

g. Audiometric testing (as required by Hearing Conservation Program).

h. Visual acuity.

i. Chest x-ray. (This test shall be performed no more frequently than every 4 years, unless directed by Occupational Physician.)

j. Electrocardiogram (as directed by Occupational Physician).

k. Urine heavy metals (arsenic, cadmium, chromium, and mercury).

l. serum lead.

m. zinc protoporphyrin.

1.14.3 Information Provided to the Occupational Physician

The physician shall be furnished with the following:

a. Site information from paragraph, SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION.

b. information on the employee's anticipated or measured exposure.

c. a description of any PPE used or to be used.

d. A description of the employee's duties as they relate to the employee's exposures (including physical demands on the employee and heat/cold stress).

e. A copy of 29 CFR 1910 Section .120, or 29 CFR 1926 Section .65.

f. Information from previous examinations not readily available to the examining physician.

g. A copy of Section 5.0 of NIOSH Pub No. 85-115.

h. Information required by 29 CFR 1910 Section .134.

1.14.4 Physician's Written Opinion

Before work begins a copy of the physician's written opinion for each employee shall be obtained and furnished to the Safety and Health Manager; and the employee. The opinion shall address the employee's ability to perform hazardous remediation work and shall contain the following:

a. The physician's recommended limitations upon the employee's assigned work and/or PPE usage.

b. The physician's opinion about increased risk to the employee's health resulting from work; and

c. A statement that the employee has been informed and advised about the results of the examination.

1.14.5 Medical Records

Documentation of medical exams shall be provided as part of the Certificate of Worker or Visitor Acknowledgment. Medical records shall be maintained in accordance with 29 CFR 1910 Section .120, and 29 CFR 1926Section .65.

1.15 RADIATION DOSIMETRY

A radiation protection and dosimetry program shall be described in the SSHP and implemented in accordance with 10 CFR 20. Employees working within a radiologically restricted area shall receive appropriate dosimetry monitoring for radiation exposure.

1.15.1 Evaluation

Radiation dosimetry shall be evaluated by an individual or company holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP). Electronic dosimetry may be used to assign external dose if approved by the Contracting Officer. Internal intake assessment and applicable monitoring shall be evaluated by the CHP.

1.15.2 Documentation

Employee exposure to external radiation shall be documented. This shall include reviewing each employee's radiation exposure history in accordance with 10 CFR 20 Section .2104, for compliance with exposure standards prior to allowing the employee access to a restricted area. If the employee has no exposure history, the employee shall provide a signed written statement to that effect.

1.15.3 Bioassay

When the possibility of internal radioactive contamination exists, a bioassay program and air monitoring program in accordance with 10 CFR 20 shall be implemented to determine internal exposure. The bioassay program shall provide sampling of employee nasal passages, urine and/or feces, or whole body counting, as appropriate to evaluate the suspected radionuclides.

1.15.4 Reporting

Reports of exposure to ionizing radiation shall be furnished to the Contracting Officer as soon as available and to each employee annually, upon termination, and within 30 days of any personal request.

1.16 EXPOSURE MONITORING/AIR SAMPLING PROGRAM

The Safety and Health Manager shall prepare and implement an exposure monitoring/air sampling program to identify and quantify safety and health hazards and airborne levels of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment for affected site personnel. Available site information shall be reviewed and the exposure monitoring/air sampling program shall be expanded and/or revised for submittal as part of the SSHP. Minimum initial requirements for the program are delineated as follows: as required by the Task Order.

1.17 HEAT AND COLD STRESS MONITORING

The Safety and Health Manager shall develop a heat stress and cold stress monitoring program for onsite activities. Details of the monitoring program, including schedules for work and rest, and physiological monitoring requirements, shall be described in the SSHP. Personnel shall be trained to recognize the symptoms of heat and cold stress. The SSHO and an alternate person shall be designated, in writing, to be responsible for the heat and cold stress monitoring program.

1.17.1 Heat Stress

Physiological monitoring shall commence when the ambient temperature is above 21.1 degrees C 70 degrees F. Monitoring frequency shall increase as the ambient temperature increases or as slow recovery rates are observed. An adequate supply of cool drinking water shall be provided for the workers. NIOSH Pub No. 85-115 may be consulted for guidance in determining protocols for prevention of heat stress.

1.17.2 Cold Stress

To guard against cold injury, appropriate clothing and warm shelter for rest periods shall be provided. Procedures to monitor and avoid cold stress shall be followed in accordance with the current TLVs for Cold Stress as recommended in ACGIH Threshold Limits.

1.18 SAFETY PROCEDURES, ENGINEERING CONTROLS AND WORK PRACTICES

The SSHP shall describe the standard operating safety procedures, engineering controls and safe work practices to be implemented for the work covered. These shall include, but not be limited to, the following:

1.18.1 General Site Rules/Prohibitions

General site rules/prohibitions (buddy system, eating, drinking, and smoking restrictions, etc.).

1.18.2 Work Permit Requirements

Radioactive work, excavation, hot work, confined space, etc.

1.18.3 Material Handling Procedures

Soils, liquids, radioactive materials.

1.18.3.1 Spill and Discharge Control

Written spill and discharge containment/control procedures shall be developed and implemented. These procedures shall address radioactive wastes, shock sensitive wastes, laboratory waste packs, material handling equipment, and appropriate procedures for tank and vault entry as well as drum and container handling, opening, sampling, shipping and transport. These procedures shall describe prevention measures, such as building berms or dikes; spill control measures and material to be used (e.g. booms, vermiculite); location of the spill control material; personal protective equipment required to cleanup spills; disposal of contaminated material; and who is responsible to report the spill. Storage of contaminated material or hazardous materials shall be appropriately bermed, diked and/or contained to prevent any spillage of material on uncontaminated soil. If the spill or discharge is reportable, and/or human health or the environment are threatened, the National Response Center, the state, and the Contracting Officer shall be notified as soon as possible.

1.18.3.2 Materials Transfer Safety

Liquids and residues shall be removed from the tanks using explosion-proof or air-driven pumps. Pump motors and suction hoses shall be bonded to the tank and grounded to prevent electrostatic ignition hazards. Use of a hand pump will be permitted to remove the last of the liquid from the bottom of the tanks. If a vacuum truck is used for removal of liquids or residues, the area of operation for the vacuum truck shall be vapor free. The truck shall be located upwind from the tank and outside the path of probable vapor travel. The vacuum pump exhaust gases shall be discharged through a hose of adequate size and length downwind of the truck and tank area. Vacuum truck operating and safety practices shall conform to API Publ 2219. Tank residues shall be collected in drums, tanks, or tank trucks labeled according to 49 CFR 171 and 49 CFR 172 and disposed of as specified. After the materials have been transferred and the tanks have been exposed, fittings and lines leading to the tanks shall be disconnected and drained of their contents. The contents of the lines shall not spill to the environment during cutting or disconnecting of tank fittings. Materials drained shall be transferred into DOT-approved drums for storage and/or transportation. Only non-sparking or non-heat producing tools shall be used to disconnect and drain or to cut through tank fittings. Electrical equipment (e.g., pumps, portable hand tools, etc.) used for tank preparation shall be explosion-proof. Following cutting or disconnecting of the fittings, openings leading to the tanks shall be plugged.

1.18.4 Drum and Container Handling

Procedures and Precautions (opening, sampling, overpacking).

1.18.5 Confined Space Entry Procedures

.

1.18.6 Hot Work

Hot work will not be permitted on or within the tanks except as outlined herein. Prior to conducting hot work, a hot work permit shall be prepared and submitted. An example format for a hot work permit shall be included in the SSHP. The permit shall describe compliance with the following procedures. After tank interiors have been decontaminated, hot work may be

conducted only when the tank is inerted, and to the extent necessary to begin dismantling the tanks. After decontamination of tank interiors, hot work shall not be performed unless monitoring indicates atmospheres within and immediately surrounding the tanks are less than 8% oxygen inside the tank and less than 10% of the LFL outside the tank; continuous monitoring shall continue until the hot work is completed. The hot work prohibition includes welding, cutting, grinding, sawing, or other similar operations which could be expected to potentially generate combustion-producing temperatures or sparks, or which could produce potentially hazardous fumes or vapors. An individual at each hot work site shall be designated as a fire watch. This person's sole responsibility shall be to monitor the hot work and have immediate access to the fire extinguisher located at each hot work site. A new permit shall be obtained at the start of each work shift during which hot work will be conducted.

1.18.7 Ignition Sources

.

1.18.8 Fire Protection and Prevention

.

1.18.9 Electrical Safety

.

1.18.10 Excavation and Trench Safety

.

1.18.11 Guarding of Machinery and Equipment

.

1.18.12 Lockout/Tagout

.

1.18.13 Fall Protection

.

1.18.14 Hazard Communication

.

1.18.15 Illumination

.

1.18.16 Sanitation

.

1.18.17 Engineering Controls

.

1.18.18 Process Safety Management

.

1.18.19 Signs and Labels

.

1.18.20 Waste Disposal

.

1.18.21 Tank Purging for Permit-Required Confined Space Entries

Tanks shall be purged for confined space entry. The flammable vapors shall be reduced to less than 10% of the LFL and the oxygen content shall be between 19.5% and 23.5%. Confined space entry into the tanks shall not be attempted unless absolutely necessary, as for example, to remove sludge from the tank. Flammable vapors may be exhausted from the tank by any of the methods from API RP 1604 listed below, or any method approved by the Contracting Officer. The SSHP shall specify the purging method to be used.

a. Ventilation by Eductor-Type Air Movers: The eductor-type air mover shall be properly bonded and grounded to prevent the generation and discharge of static electricity. When using this method, the fill (drop) tube shall remain in place to ensure ventilation at the bottom of the tank. Tanks equipped with fill (drop) tubes that are not removable shall be purged by this method. An eductor extension shall be used to discharge vapors a minimum of 3.7 meters 12 feet above grade or 1 meter 3 feet above adjacent roof lines, whichever is greater. If this is not possible, alternative methods shall be proposed and approved prior to purging. Noise levels generated by these devices as a result of high airflow may exceed OSHA PELs. Noise levels shall be evaluated and appropriate hearing protection shall be provided.

b. Ventilation by Diffused Air Blowers: When using this purging method, the air-diffusing pipe is properly bonded and grounded to prevent the discharge of a spark. Fill (drop) tubes shall be removed to allow proper diffusion of the air in the tank. Air supply shall be from a compressor that has been checked to ensure that Grade D breathing air is being supplied. Air pressure in the tank shall not exceed 34 kPa (5 psi) 5 psi gauge to avoid tank failure.

c. Commercial Emulsifiers and Volatile Fuel Encapsulators: These products are completely miscible in water, aid in the elimination of flammable vapors, and are biodegradable. Regulatory requirements for treatment and disposal of the water shall be determined prior to using this method. Standing outside the tank, the operator shall rinse the tank with a 3-to-6 percent solution of the product using a pressure sprayer through a tank opening. Explosive concentrations shall be measured at several levels (top, middle, and bottom) within the tank. If readings are greater than 10% of the LFL, the tank shall be rinsed again. When LFL readings are acceptable, the water in the tank shall be pumped out for disposal.

1.18.22 Tank Inerting (No Entry)

Following the removal of tank contents but prior to excavation of the tanks and tank preparation activities, the tanks shall be inerted only by introducing an inert gas, carbon dioxide (CO_2) or liquid nitrogen (N_2), to remove flammable vapors. Before inerting, all openings in the tanks shall be plugged with threaded or expansion type plugs except the vent tube and the opening to be used for introducing the inert gas. Within 30 minutes prior to initiating any activities (e.g., excavating, preparation, removal, opening, demolition, transportation, or other similar activities) involving a tank which has been inerted, the inerted nature of the tank (oxygen levels less than 8%) shall be verified.

a. CO_2 fire extinguishers shall not be used for inerting the tank interiors. If a compressed gas (e.g., CO_2 or N_2) is introduced into the tank the following requirements shall be met to prevent the buildup of static electricity:

(1) The UST and the compressed gas supply tank shall be bonded

together and grounded.

(2) The compressed gas shall be supplied only at low flows.

(3) The liquid or gas shall be released at the tank bottom so that static electricity is not generated by liquid falling to the bottom of the tank. The tank shall be slowly filled from the bottom up.

b. Dry ice, which evolves CO_2 gas as it evaporates, if used, shall be introduced in the amount of at least 10 kg per 400 L (3 pounds per 100 gal) 3 pounds per 100 gallons of tank capacity. Skin contact with dry ice shall be prevented by wearing heavy cloth gloves.

c. Sufficient quantities of inert gas (CO_2 or N_2) shall be introduced into the tanks to lower the oxygen content to less than 8%. Pressure inside the tank shall not exceed 34 kPa (5 psi) 5 psi. Prior to proceeding with additional activities on the tank (e.g., excavating), the oxygen content of the tanks shall be monitored to confirm that it is less than 8%. Additional oxygen level monitoring shall be conducted at least hourly while activities involving the tanks are underway but prior to decontamination of tank interiors; at least daily during periods in which the tanks are not being disturbed but prior to decontamination of their interiors; or as directed by the Contracting Officer. If monitoring of tank interiors indicates that oxygen levels are not remaining below 8%, additional inert gas shall be introduced and more frequent oxygen monitoring shall be initiated.

d. During inerting procedures, an extension vent tube a minimum of 3.7 meters 12 feet above grade or 1 meter 3 feet above any adjacent (within 22.5 meters 75 feet) roof lines, whichever is greater shall be used to discharge tank vapors. If this is not possible, alternative methods shall be proposed and approved prior to inerting. Continuous combustible gas/oxygen monitoring shall be conducted at the vent and inert gas introduction holes.

1.18.23 Tank Atmosphere Testing

The air within the storage tanks shall be monitored to ensure the space is either adequately purged and safe for personnel entry, or to ensure the tank has been adequately inerted and the oxygen content is less than 8%. In both instances, monitoring shall be performed at the top, bottom, and middle areas of the tanks to ensure stratification has not occurred. Monitoring results shall be reported to project personnel to ensure safe operations. Data shall be recorded as specified in paragraph EXPOSURE MONITORING/AIR SAMPLING PROGRAM.

1.18.23.1 Monitoring to Ensure Purging

When monitoring to ensure purging, both oxygen content and LFL readings are required. Prior to obtaining LFL readings, the Contractor shall monitor the oxygen content of the space and verify that the combustible gas indicators are operating within the oxygen limits identified by the CGI manufacturer. Personnel shall not be permitted to enter spaces with oxygen levels less than 19.5%, except in emergencies, and then only when equipped with the proper PPE and when following permit-required confined space entry procedures. Toxic air contaminants shall be monitored as specified in paragraph EXPOSURE MONITORING/AIR SAMPLING PROGRAM.

1.18.23.2 Monitoring to Ensure Inerting

Inerted tanks shall be monitored to ensure oxygen readings remain below a maximum allowable percentage of 8% by volume.

1.18.24 Tank Lifting

Tanks shall be lifted using equipment with a rated capacity greater than the load to be lifted. Tanks shall be lifted by lifting eyes or by straps under the ends of the tanks. Tanks shall not be lifted by the manhole flange or by removing the bungs. Personnel shall be directed to remain away from the ends of the tanks and tanks shall be positioned, whenever possible, with the ends oriented away from occupied or traveled areas, due to potential for rupture. During transportation, the tanks shall be secured to prevent movement.

1.18.25 Tank Demolition

The tanks excavated as part of this project shall be demolished before being removed from the site unless they are transported directly to a state certified tank destruction facility. Demolition will not be permitted until a decontamination of the interiors and exteriors is complete. Demolition shall involve opening the tanks sufficiently to permanently prohibit further use as containers of liquids. Tanks shall be inerted and tested before they are opened. Plans and procedures, including a list of materials and supplies, for safely and effectively demolishing the tanks shall be submitted in the SSHP.

1.18.26 Tank Cleaning

Safety practices and procedures for the cleaning of the storage tanks shall conform to API Std 2015. Opening of the tanks to permit decontamination shall be conducted utilizing only methods approved in the SSHP. The interior and exterior of the tank shall be decontaminated prior to removing it from the work site unless the tank is being transported directly to a state certified tank destruction facility. Plans and procedures, including materials and supplies, for safely and effectively opening the tanks, cleaning surfaces of the interior and exterior of the tanks, and disposing of the decontamination fluids shall be submitted in the SSHP. Volatile organic solvents shall not be permitted to be utilized for decontamination procedures. Personnel shall not enter any of the storage tanks as a part of this project, except when following permit-required confined space entry procedures. Decontamination fluids shall be collected and disposed. Upon completion of this project, written certification shall be made that the tank was properly decontaminated prior to being removed from the site.

1.19 SITE CONTROL MEASURES

In order to prevent the spread of contamination and control the flow of personnel, vehicles, and materials into and out of work areas, site control measures shall be established and described in the SSHP. The SSHP shall describe the methodology to be used by the Safety and Health Manager and SSHO in determining work zone designations and their modifications, and procedures to limit the spread of contamination. The SSHP shall include procedures for the implementation and enforcement of safety and health rules for all persons on the site, including employers, employees, outside Contractors, government representatives, and visitors.

1.19.1 Work Zones

Initial anticipated work zone boundaries are shown on the drawings. Utilizing this guidance, work zone boundaries (exclusion zone, including restricted and regulated areas; contamination reduction zone; and support zone) and access points shall be established and the boundary delineations shall be included on the drawings and in the SSHP. Delineation of work zone boundaries shall be based on the contamination characterization data and the hazard/risk analysis to be performed as described in paragraph: HAZARD/RISK ANALYSIS. As work progresses and field conditions are monitored, work zone boundaries may be modified with approval of the Contracting Officer. Work zones shall be clearly identified and marked in the field (using fences, tape, signs, etc.). A site map, showing work zone boundaries and locations of decontamination facilities, shall be posted in the onsite office. Work zones shall consist of the following:

a. Exclusion Zone (EZ): The exclusion zone is the area where hazardous contamination is either known or expected to occur and the greatest potential for exposure exists. Entry into this area shall be controlled and exit may only be made through the CRZ.

b. Contamination Reduction Zone (CRZ): The CRZ is the transition area between the Exclusion Zone and the Support Zone. The personnel and equipment decontamination areas shall be separate and unique areas located in the CRZ.

c. Support Zone (SZ): The Support Zone is defined as areas of the site, other than exclusion zones and contamination reduction zones, where workers do not have the potential to be exposed to hazardous substances or dangerous conditions resulting from hazardous waste operations. The Support Zone shall be secured against active or passive contamination. Site offices, parking areas, and other support facilities shall be located in the Support Zone.

1.19.2 Site Control Log

A log of personnel visiting, entering, or working on the site shall be maintained. The log shall include the following: date, name, agency or company, time entering and exiting site, time entering and exiting the exclusion zone (if applicable), and personal protective equipment utilized. Before visitors are allowed to enter the Contamination Reduction Zone or Exclusion Zone, they shall show proof of current training, medical surveillance and respirator fit testing (if respirators are required for the tasks to be performed) and shall fill out the Certificate of Worker or Visitor Acknowledgment. This visitor information, including date, shall be recorded in the log.

1.19.3 Communication

An employee alarm system that has adequate means of on and off site communication shall be provided and installed in accordance with 29 CFR 1910 Section .165. The means of communication shall be able to be perceived above ambient noise or light levels by employees in the affected portions of the workplace. The signals shall be distinctive and recognizable as messages to evacuate or to perform critical operations.

1.19.4 Site Security

Site security shall be provided. Signs shall be printed in bold large letters on contrasting backgrounds in English and/or where appropriate, in the predominant language of workers unable to read English. Signs shall be

visible from all points where entry might occur and at such distances from the restricted area that employees may read the signs and take necessary protective steps before entering.

1.20 PERSONAL HYGIENE AND DECONTAMINATION

Personnel entering the Exclusion or Contamination Reduction Zones or otherwise exposed or subject to exposure to hazardous chemical vapors, liquids, or contaminated solids shall adhere to the following personal hygiene and decontamination provisions. Decontamination shall be performed in the CRZ prior to entering the Support Zone from the Exclusion Zone. Chapter 10.0 of NIOSH Pub No. 85-115 shall be consulted when preparing decontamination procedures. A detailed discussion of personal hygiene and decontamination facilities and procedures to be followed by site workers shall be submitted as part of the SSHP. Employees shall be trained in the procedures and the procedures shall be enforced throughout site operations. Persons disregarding these provisions of the SSHP shall be barred from the site.

1.20.1 Decontamination Facilities

The following facilities shall be provided: 1) A personnel decontamination facility in the CRZ. This facility shall be used by both Contractor personnel and government representatives. The decontamination facility shall provide for separation of street clothing and contaminated PPE and shall be equipped with heating, lighting, ventilation, a change room and lockers, hot and cold water, shower facilities with hot and cold water, towels, soap in sufficient quantities for all anticipated personnel, and waste water storage facilities for controlling the disposal of used water. 2) Laundry facilities or provisions of laundry service. If an offsite laundry service is used, they shall be notified, in writing, of the possibility and nature of contaminants expected on clothing.

1.20.2 Procedures

Minimum decontamination procedures are listed below. Available site information shall be reviewed and these procedures shall be expanded and/or revised for submittal as part of the SSHP.

1.21 EQUIPMENT DECONTAMINATION

Vehicles and equipment used in the EZ shall be decontaminated in the CRZ prior to leaving the site. The procedures for decontamination of vehicles and equipment shall be addressed in the SSHP.

1.21.1 Decontamination Facilities

A vehicle/equipment decontamination station shall be provided within the CRZ for decontaminating vehicles and equipment leaving the EZ. The decontamination station shall be as required by the Task Order.

1.21.2 Procedures

Procedures for equipment decontamination shall be developed and utilized to prevent the spread of contamination into the SZ and offsite areas. These procedures shall address disposal of contaminated products and spent materials used on the site, including containers, fluids, oils, etc. Any item taken into the EZ shall be assumed to be contaminated and shall be inspected and/or decontaminated before the item leaves the area. Vehicles,

equipment, and materials shall be cleaned and decontaminated prior to leaving the site. Construction material shall be handled in such a way as to minimize the potential for contaminants being spread and/or carried offsite. Prior to exiting the site, vehicles and equipment shall be monitored to ensure the adequacy of decontamination.

1.22 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS

The SSHP shall describe the emergency and first aid equipment to be available onsite. The following items, as a minimum, shall be maintained onsite and available for immediate use:

a. First aid equipment and supplies approved by the consulting physician.

b. Emergency eyewashes and showers which comply with ANSI Z358.1.

c. Emergency-use respirators. For escape purposes, 5- to 15-minute emergency escape masks shall be supplied. For rescue purposes, 2 positive pressure self-contained breathing apparatus (SCBA) shall be supplied. These shall be dedicated for emergency use only and maintained onsite in the Contamination Reduction Zone.

d. Fire extinguishers with a minimum rating of 20-A:120-B:C shall be provided at site facilities and in all vehicles and at any other site locations where flammable or combustible materials present a fire risk.

1.23 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES

An Emergency Response Plan, that meets the requirements of 29 CFR 1910 Section .120 (l) and 29 CFR 1926 Section .65 (l), shall be developed and implemented as a section of the SSHP. In the event of any emergency associated with remedial action, the Contractor shall, without delay, alert all onsite employees that there is an emergency situation; take action to remove or otherwise minimize the cause of the emergency; alert the Contracting Officer; and institute measures necessary to prevent repetition of the conditions or actions leading to, or resulting in, the emergency. Employees that are required to respond to hazardous emergency situations shall be trained in how to respond to such expected emergencies. The plan shall be rehearsed regularly as part of the overall training program for site operations. The plan shall be reviewed periodically and revised as necessary to reflect new or changing site conditions or information. Copies of the accepted SSHP and revisions shall be provided to the affected local emergency response agencies. The following elements, as a minimum, shall be addressed in the plan:

a. Pre-emergency planning. The local emergency response agencies shall be contacted and met with during preparation of the Emergency Response Plan. Agencies to be contacted include local fire, police, and rescue authorities with jurisdiction and nearby medical facilities that may be utilized for emergency treatment of injured personnel. At these meetings, the agencies shall be notified of upcoming site activities and potential emergency situations. The response agencies' capabilities shall be ascertained and written response commitments obtained. The Contractor shall ensure the Emergency Response Plan for the site is compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and Federal agencies.

b. Personnel roles, lines of authority, communications for

emergencies.

c. Emergency recognition and prevention.

d. Site topography, layout, and prevailing weather conditions.

e. Criteria and procedures for site evacuation (emergency alerting procedures, employee alarm system, emergency PPE and equipment, safe distances, places of refuge, evacuation routes, site security and control).

f. Specific procedures for decontamination and medical treatment of injured personnel.

g. Route maps to nearest prenotified medical facility. Site-support vehicles shall be equipped with maps. At the beginning of project operations, drivers of the support vehicles shall become familiar with the emergency route and the travel time required.

h. Emergency alerting and response procedures including posted instructions and a list of names and telephone numbers of emergency contacts (physician, nearby medical facility, fire and police departments, ambulance service, Federal, state, and local environmental agencies; as well as Safety and Health Manager, the Site Superintendent, the Contracting Officer and/or their alternates).

i. Criteria for initiating community alert program, contacts, and responsibilities.

j. Procedures for reporting incidents to appropriate government agencies. In the event that an incident such as an explosion or fire, or a spill or release of toxic materials occurs during the course of the project, the appropriate government agencies shall be immediately notified. In addition, the Contracting Officer shall be verbally notified immediately and receive a written notification within 24 hours. The report shall include the following items:

(1) Name, organization, telephone number, and location of the Contractor.

(2) Name and title of the person(s) reporting.

(3) Date and time of the incident.

(4) Location of the incident, i.e., site location, facility name.

(5) Brief summary of the incident giving pertinent details including type of operation ongoing at the time of the incident.

(6) Cause of the incident, if known.

(7) Casualties (fatalities, disabling injuries).

(8) Details of any existing chemical hazard or contamination.

(9) Estimated property damage, if applicable.

(10) Nature of damage, effect on contract schedule.

(11) Action taken to ensure safety and security.

(12) Other damage or injuries sustained, public or private.

k. Procedures for critique of emergency responses and follow-up.

1.24 CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT

A copy of a Contractor-generated certificate of worker/visitor acknowledgement shall be completed and submitted for each visitor allowed to enter contamination reduction or exclusion zones, and for each employee, following the example certificate at the end of this section.

1.25 INSPECTIONS

The SSHO shall perform daily inspections of the jobsite and the work in progress to ensure compliance with EM 385-1-1, the Safety and Health Program, the SSHP and other occupational health and safety requirements of the contract, and to determine the effectiveness of the SSHP. Procedures for correcting deficiencies (including actions, timetable and responsibilities) shall be described in the SSHP. Follow-up inspections to ensure correction of deficiencies shall be conducted and documented. Daily safety inspection logs shall be used to document the inspections, noting safety and health deficiencies, deficiencies in the effectiveness of the SSHP, and corrective actions taken. The SSHO's Daily Inspection Logs shall be attached to and submitted with the Daily Quality Control reports. Each entry shall include the following: date, work area checked, employees present in work area, PPE and work equipment being used in each area, special safety and health issues and notes, and signature of preparer. In the event of an accident, the Contracting Officer shall be notified according to EM 385-1-1. Within 2 working days of any reportable accident, an Accident Report shall be completed on ENG Form 3394 and submitted.

1.26 SAFETY AND HEALTH PHASE-OUT REPORT

A Safety and Health Phase-Out Report shall be submitted within 10 working days following completion of the work, prior to final acceptance of the work. The following minimum information shall be included:

a. Summary of the overall performance of safety and health (accidents or incidents including near misses, unusual events, lessons learned, etc.).

b. Final decontamination documentation including procedures and techniques used to decontaminate equipment, vehicles, and on site facilities.

c. Summary of exposure monitoring and air sampling accomplished during the project.

d. Signatures of Safety and Health Manager and SSHO.

EXAMPLE CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGMENT

PROJECT NAME CONTRACT NO.
PROJECT ADDRESS
CONTRACTOR'S NAME
EMPLOYEE'S/VISITOR'S NAME

The contract for the above project requires the following: that you be provided with and complete formal and site-specific training; that you be supplied with proper personal protective equipment including respirators; that you be trained in its use; and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you.

I HAVE READ, UNDERSTAND AND AGREE TO FOLLOW THE SITE SAFETY AND HEALTH PLAN FOR THIS SITE.

Name Date

--- ---

FORMAL TRAINING: I have completed the following formal training courses that meet OSHA's requirements:

Date Completed

40 hour: ....._____
8 hour supervisory:....._____
8 hour refresher:....._____

SITE-SPECIFIC TRAINING: I have been provided and have completed the site-specific training required by this Contract. The Site Safety and Health Officer conducted the training. _____

RESPIRATORY PROTECTION: I have been trained in accordance with the criteria in the Contractor's or my Employer's Respiratory Protection program. I have been trained in the proper work procedures and use and limitations of the respirator(s) I will wear. I have been trained in and will abide by the facial hair policy. _____

RESPIRATOR FIT-TEST TRAINING: I have been trained in the proper selection, fit, use, care, cleaning, and maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in accordance with the criteria in the Contractor's or my employer's Respiratory Program and have received a satisfactory fit. I have___ have not____ been assigned my individual respirator.] I have been taught how to properly perform positive and negative pressure fit-check upon donning negative pressure respirators each time._____

MEDICAL EXAMINATION: I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests and may have included an evaluation of a chest ax-ray. A physician made determination regarding my physical capacity to perform work tasks on the project while wearing protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer's industrial hygienist evaluated the medical certification provided by the physician and checked the appropriate blank below. The physician determined that there:

were no limitations to performing the required work tasks;

were identified physical limitations to performing the required work tasks.

Date medical exam completed

Employee's/Visitor's Signature _____
Date _____

Printed Name _____

Social Security Number _____

Contractor's Site Safety and Health Officer Signature _____

Date _____

Printed Name _____

Social Security Number _____

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01410

ENVIRONMENT PROTECTION

1.1 GENERAL REQUIREMENTS
1.1.1 Subcontractors
1.1.2 Environmental Protection Plan
1.1.3 Permits
1.1.4 Preconstruction Survey
1.1.5 Meetings
1.1.6 Notification
1.1.7 Litigation
1.1.8 Previously Used Equipment
1.1.9 Payment
1.2 LAND RESOURCES
1.2.1 Work Area Limits
1.2.2 Landscape
1.2.3 Unprotected Erodible Soils
1.2.4 Disturbed Areas
1.2.5 Contractor Facilities and Work Areas
1.3 WATER RESOURCES
1.3.1 Washing and Curing Water
1.3.2 Cofferdam and Diversion Operations
1.3.3 Stream Crossings
1.3.4 Fish and Wildlife
1.4 AIR RESOURCES
1.4.1 Particulates
1.4.2 Hydrocarbons and Carbon Monoxide
1.4.3 Odors
1.4.4 Sound Intrusions
1.5 WASTE DISPOSAL
1.5.1 Solid Wastes
1.5.2 Chemical Wastes
1.5.3 Hazardous Wastes
1.5.4 Burning
1.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES
1.7 POST CONSTRUCTION CLEANUP
1.8 RESTORATION OF LANDSCAPE DAMAGE
1.9 MAINTENANCE OF POLLUTION FACILITIES
1.10 TRAINING OF CONTRACTOR PERSONNEL

-- End of Section Table of Contents --

SECTION 01410

ENVIRONMENT PROTECTION

1.1 GENERAL REQUIREMENTS

The Contractor shall perform the work minimizing environmental pollution and damage as the result of construction operations. Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, use of chemicals, as well as other pollutants. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract.

1.1.1 Subcontractors

The Contractor shall ensure compliance with this section by subcontractors.

1.1.2 Environmental Protection Plan

The Contractor shall submit an environmental protection plan within 30 days after receipt of the contract award. Approval of the Contractor's plan will not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures. The environmental protection plan shall include, but shall not be limited to, the following:

a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.

b. Methods for protection of features to be preserved within authorized work areas like trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological, and cultural resources.

c. Procedures to be implemented to provide the required environmental protection, to comply with the applicable laws and regulations, and to correct pollution due to accident, natural causes, or failure to follow the procedures of the environmental protection plan.

d. Location of the solid waste disposal area.

e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess

or spoil materials.

f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.

g. Traffic control plan including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather, and the amount of mud transported onto paved public roads by vehicles or runoff.

h. Methods of protecting surface and ground water during construction activities.

i. A recycling and waste prevention plan with a list of measures to reduce consumption of energy and natural resources; for example: the possibility to shred fallen trees and use them as mulch shall be considered as an alternative to burning or burial.

j. Training for Contractor's personnel during the construction period.

1.1.3 Permits

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Contract Clause PERMITS AND RESPONSIBILITIES. The State department of natural resources, through the national pollutant discharge elimination system (NPDES), requires general permits, a notice of intent, and a notice of discontinuation. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

1.1.4 Preconstruction Survey

Prior to starting any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey after which the Contractor shall prepare a brief report indicating on a layout plan the condition of trees, shrubs and grassed areas immediately adjacent to work sites and adjacent to the assigned storage area and access routes as applicable. This report will be signed by both the Contracting Officer and the Contractor upon mutual agreement as to its accuracy and completeness.

1.1.5 Meetings

The Contractor shall meet with representatives of the Contracting Officer to alter the environmental protection plan as needed for compliance with the environmental pollution control program.

1.1.6 Notification

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the previously mentioned Federal, State or local laws or regulations, permits, and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action when approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspensions.

1.1.7 Litigation

If work is suspended, delayed, or interrupted due to a court order of competent jurisdiction, the Contracting Officer will determine whether the order is due in any part to the acts or omissions of the Contractor, or subcontractors at any tier, not required by the terms of the contract. If it is determined that the order is not due to Contractor's failing, such suspension, delay, or interruption shall be considered as ordered by the Contracting Officer in the administration of the contract under the contract clause SUSPENSION OF WORK.

1.1.8 Previously Used Equipment

The Contractor shall thoroughly clean all construction equipment previously used at other sites before it is brought into the work areas, ensuring that soil residuals are removed and that egg deposits from plant pests are not present; the Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

1.1.9 Payment

No separate payment will be made for work covered under this section; all costs associated with this section shall be included in the contract unit and/or lump sum prices in the Bidding Schedule.

1.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings associated with the Task Order. Prior to the beginning of any construction, the Contractor shall identify the land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without permission. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, earth or other material displaced into uncleared areas shall be removed.

1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

1.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

1.2.3 Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in cases where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the developed areas as approved by the Contracting Officer.

1.2.4 Disturbed Areas

The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

a. Retardation and control of runoff. Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of diversion ditches, benches, berms, and by any measures required by area wide plans under the Clean Water Act.

b. Erosion and sedimentation control devices. The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as indicated on the drawings. Berms, dikes, drains, sedimentation basins, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

c. Sediment basins. Sediment from construction areas shall be trapped in temporary or permanent sediment basins in accordance with the drawings. The basins shall accommodate the runoff of a local 5 year storm. After each storm, the basins shall be pumped dry and accumulated sediment shall be removed to maintain basin effectiveness. Overflow shall be controlled by paved weirs or by vertical overflow pipes. The collected topsoil sediment shall be reused for fill on the construction site, and/or stockpiled for use at another site. The Contractor shall institute effluent quality monitoring programs as required by State and local environmental agencies.

1.2.5 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby waters. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby waters. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

1.3 WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation

when such application may cause contamination of the fresh water reserve. Monitoring of water areas affected by construction shall be the Contractor's responsibility. All water areas affected by construction activities shall be monitored by the Contractor.

1.3.1 Washing and Curing Water

Waste waters directly derived from any construction activities shall not be allowed to enter water areas. Waste waters shall be collected and placed in retention ponds where suspended material can be settled out or the water evaporates to separate pollutants from the water. Analysis shall be performed and results reviewed and approved before water in retention ponds is discharged.

1.3.2 Cofferdam and Diversion Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and on water quality for downstream use.

1.3.3 Stream Crossings

Stream crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State or local government.

1.3.4 Fish and Wildlife

The Contractor shall minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning of construction operations.

1.4 AIR RESOURCES

Equipment operation and activities or processes performed by the Contractor in accomplishing the specified construction shall be in accordance with the Air Quality Control Board rules and all Federal emission and performance laws and standards. Ambient Air Quality Standards set by the Environmental Protection Agency shall be maintained. Monitoring of air quality shall be the Contractor's responsibility. All air areas affected by the construction activities shall be monitored by the Contractor. Monitoring results will be periodically reviewed by the Government to ensure compliance.

1.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in

the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

1.4.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

1.4.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

1.4.4 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the local agency rules.

1.5 WASTE DISPOSAL

Disposal of wastes shall be as specified in Section 02120TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS and 02220 DEMOLITION and as specified below.

1.5.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

1.5.2 Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 150 mm 6 inches of the top. Wastes shall be disposed of in accordance with Federal and local laws and regulations.

1.5.3 Hazardous Wastes

The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing and shall collect waste in suitable containers observing compatibility. The Contractor shall transport hazardous waste off Government property and dispose of it in compliance with Federal and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility.

1.5.4 Burning

Burning will be allowed only if permitted in other sections of the specifications or authorized in writing by the Contracting Officer. The specific time, location, and manner of burning shall be subject to approval. Fires shall be confined to a closed vessel, guarded at all times, and shall be under constant surveillance until they have burned out or have been extinguished. Burning shall be thorough reducing the materials to ashes.

1.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Existing historical, archaeological, and cultural resources within the Contractor's work area will be so designated by the Contracting Officer if any has been identified. The Contractor shall take precautions to preserve all such resources as they existed at the time they were first pointed out. The Contractor shall provide and install protection for these resources and be responsible for their preservation during the life of the contract. If during excavation or other construction activities any previously unidentified or unanticipated resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rocks or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer. While waiting for instructions the Contractor shall record, report, and preserve the finds in accordance with the local orfacility historical preservation authority.

1.7 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction.

1.8 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work areas.

1.9 MAINTENANCE OF POLLUTION FACILITIES

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

1.10 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental pollution control.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES
1.2 PAYMENT

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS
3.2 QUALITY CONTROL PLAN
3.2.1 Content of the CQC Plan
3.2.2 Acceptance of Plan
3.2.3 Notification of Changes
3.3 COORDINATION MEETING
3.4 QUALITY CONTROL ORGANIZATION
3.4.1 Personnel Requirements
3.4.2 CQC System Manager
3.4.3 CQC Personnel
3.4.4 Additional Requirement
3.4.5 Organizational Changes
3.5 SUBMITTALS AND DELIVERABLES
3.6 CONTROL
3.6.1 Preparatory Phase
3.6.2 Initial Phase
3.6.3 Follow-up Phase
3.6.4 Additional Preparatory and Initial Phases
3.7 TESTS
3.7.1 Testing Procedure
3.7.2 Testing Laboratories
3.7.2.1 Capability Check
3.7.2.2 Capability Recheck
3.7.3 Onsite Laboratory
3.8 COMPLETION INSPECTION
3.8.1 Punch-Out Inspection
3.8.2 Pre-Final Inspection
3.8.3 Final Acceptance Inspection
3.9 DOCUMENTATION
3.10 SAMPLE FORMS
3.11 NOTIFICATION OF NONCOMPLIANCE

-- End of Section Table of Contents --

SECTION 01451

CONTRACTOR QUALITY CONTROL

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 D 3740	(1996) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1995b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production.

3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 30 days after award of the contract, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled

"Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan. Construction, under the first task order, will be permitted to begin only after acceptance of the CQC Plan applicable to the particular feature of work to be started.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the

specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.3 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 14 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 5 years construction experience on construction similar to this contract.

This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: environmental, architectural. These individuals may be employees of the prime or subcontractor; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

Experience Matrix

	Area	Qualifications
a.	Civil	Graduate Civil Engineer with 2 years experience in the type of work being performed on this project or technician with 5 yrs related experience
b.	Mechanical	Graduate Mechanical Engineer with 2 yrs experience or person with 5 yrs related experience
c.	Electrical	Graduate Electrical Engineer with 2 yrs related experience or person with 5 yrs related experience
d.	Structural	Graduate Structural Engineer with 2 yrs experience or person with 5 yrs related experience
e.	Architectural	Graduate Architect with 2 yrs experience or person with 5 yrs related experience
f.	Environmental	Graduate Environmental Engineer with 3 yrs experience
g.	Submittals	Submittal Clerk with 1 yr experience
h.	Occupied family housing	Person, customer relations

Experience Matrix

Area	Qualifications
	type, coordinator experience
i. Concrete, Pavements and Soils	Materials Technician with 2 yrs experience for the appropriate area

3.4.4 Additional Requirement

In addition to the above experience and/or education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered at the Los Angeles District, Corps of Engineers; POC Mr Emanuel Molina, (213) 452-3382.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that protion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.

b. A review of the contract drawings.

c. A check to assure that all materials and/or equipment have been

tested, submitted, and approved.

d. Review of provisions that have been made to provide required control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall

be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date

taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor may be assessed a charge to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or

any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.

g. Offsite surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 48 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

1.1 GENERAL REQUIREMENTS
1.1.1 Site Plan
1.1.2 Identification of Employees
1.1.3 Employee Parking
1.2 AVAILABILITY AND USE OF UTILITY SERVICES
1.2.1 Payment for Utility Services
1.2.2 Sanitation
1.2.3 Telephone
1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN
1.3.1 Bulletin Board
1.3.2 Project and Safety Signs
1.4 PROTECTION AND MAINTENANCE OF TRAFFIC
1.4.1 Haul Roads
1.4.2 Barricades
1.5 CONTRACTOR'S TEMPORARY FACILITIES
1.5.1 Administrative Field Offices
1.5.2 Storage Area
1.5.3 Supplemental Storage Area
1.5.4 Appearance of Trailers
1.5.5 Maintenance of Storage Area
1.5.6 New Building
1.5.7 Security Provisions
1.6 PLANT COMMUNICATION
1.7 TEMPORARY PROJECT SAFETY FENCING
1.8 CLEANUP
1.9 RESTORATION OF STORAGE AREA

-- End of Section Table of Contents --

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

For a particular task order, the Contractor may be required to prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.1.2 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.1.3 Employee Parking

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 Payment for Utility Services

The Government will make all reasonably required utilities available to the Contractor from existing outlets and supplies, as specified in the Task Order. Unless otherwise provided in the Task Order, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

1.2.2 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

1.2.3 Telephone

The Contractor shall make arrangements and pay all costs for telephone facilities desired.

1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.3.1 Bulletin Board

Immediately upon beginning of work specified in the Task Order, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 915 by 1220 mm 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.3.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as shown on the drawings inthe Task Order. The signs shall be erected within 15 days after receipt of the notice to proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. Upon completion of the project, the signs shall be removed from the site.

1.4 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

1.4.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and

hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.4.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.5 CONTRACTOR'S TEMPORARY FACILITIES

1.5.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.5.2 Storage Area

The Contractor shall construct a temporary 1.8 m 6 foot high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored (as provided in the task order), so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the military boundaries. Trailers, equipment, or materials shall not be open to public view with the exception of those items which are in support of ongoing work on any given day. Materials shall not be stockpiled outside the fence in preparation for the next day's work. Mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment, shall be parked within the fenced area at the end of each work day.

1.5.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but shall be within the military boundaries. Fencing of materials or equipment will not be required at this site; however, the Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

1.5.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting

Officer, require exterior painting or maintenance will not be allowed on the military property.

1.5.5 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

1.5.6 New Building

In the event a new building is constructed for the temporary project field office, it shall be a minimum 3.6 m 12 feet in width, 5 m 16 feet in length and have a minimum of 2.1 m 7 feet headroom. It shall be equipped with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. It shall be provided with a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building shall be waterproof, shall be supplied with heater, shall have a minimum of two doors, electric lights, a telephone, a battery operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Approved sanitary facilities shall be furnished. The windows and doors shall be screened and the doors provided with dead bolt type locking devices or a padlock and heavy duty hasp bolted to the door. Door hinge pins shall be non-removable. The windows shall be arranged to open and to be securely fastened from the inside. Glass panels in windows shall be protected by bars or heavy mesh screens to prevent easy access to the building through these panels. In warm weather, air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 11 degrees C 20 degrees F below the outside temperature when the outside temperature is 35 degrees C 95 degrees F, shall be furnished. Any new building erected for a temporary field office shall be maintained by the Contractor during the life of the contract and upon completion and acceptance of the work shall become the property of the Contractor and shall be removed from the site. All charges for telephone service for the temporary field office shall be borne by the Contractor.

1.5.7 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

1.6 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available

for use by Government personnel.

1.7 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 1.1 m 42 inches high, supported and tightly secured to steel posts located on maximum 3 m 10 foot centers, constructed at the approved location. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

1.8 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.9 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --