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Section SF 1449 - CONTINUATION SHEET

SCHEDULE

**SECTION B  
SUPPLIES OR SERVICES AND PRICES/COSTS**

Item No.	Description of Item	Quantity	Unit	Unit Price	Amount
0001	Remove, Rehabilitate, Reassemble and Reinstall Cylinders for Gates E1, E2 and E3	1	JOB	L.S.	\$ _____
0002	Remove, Rehabilitate, Reassemble and Reinstall Cylinders for Gates R1 and R2	1	JOB	L.S.	\$ _____
0003	Remove, Rehabilitate, Reassemble and Reinstall Cylinders for Gate R3	1	JOB	L.S.	\$ _____
0004	Flushing, Cleaning, Partial Replacement, and Testing of the Hydraulic Fluid	1	JOB	L.S.	\$ _____
0005	All Work for Emergency Gate Position Indicators	1	JOB	L.S.	\$ _____
0006	Test Hydraulic System	1	JOB	L.S.	\$ _____
0007	All Work for Access Platforms, Gratings and Ladders	1	JOB	L.S.	\$ _____
0008	Contract Data -				
0008AA	All Work for As-Built Drawings	1	JOB	LS.	\$20,000
0008AB	All Work for O&M Manuals	1	JOB	L.S.	\$10,000
0008AC	All Other Contract Data Not Included under Items 0008AA and 0008AB				NSP
	TOTAL PRICE (Line Items 0001 Through 0008)				\$ _____

Notes:

NSP - not separately priced

The dollar amount established in Item Nos. 0008AA and 0008AB shall not be revised by bidders. The dollar amount established in Item Nos. 0008AA and 0008AB shall not be revised by bidders.

INFO**NAICS Coding versus SIC Coding**

**The computer program used to generate this document does not allow completion of Block 10, Standard Form (SF) 1449, with a NAICS code. The SIC Code, 76999 under Block 10 shall be read as if completed with the NAICS code 811310. The size standard is \$6 Million.**

**RESPONSES MUST BE SUBMITTED TO THIS OFFICE  
NO LATER THAN MAY 5, 2003  
10:00 AM  
LOCAL TIME**

**INFORMATION FOR WRITTEN QUOTES:**

Please note the following changes, clarifications, or additions to the terms in various provisions and clauses included in this solicitation.

Whenever the words "offer", "proposal", "offerers", or similar terms are used in this solicitation, they shall be read to mean "quote", "quotation", "quoter", or similar corresponding term to reflect that this solicitation is a Request for Quotations (RFQ), not a Request for Proposals (RFP).

Since this solicitation is a RFQ instead of an RFP, paragraphs (g) and (h) of FAR 52.212-1 are deleted.

**PROSPECTIVE OFFERORS:** THE DIRECTOR OF DEFENSE PROCUREMENT HAS ISSUED A FINAL RULE AMENDING THE DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT (DFARS) THAT REQUIRES CONTRACTORS TO BE REGISTERED IN THE DOD CENTRAL CONTRAL CONTRACTOR REGISTRATION (CCR) FOR AWARDS RESULTING FROM SOLICITATION ISSUED AFTER MAY 31, 1998.

THIS RULE EFFICIENTLY IMPLEMENTS THE DEBT COLLECTION IMPROVEMENT ACT OF 1996 AS IT REQUIRES CONTRACTORS TO BE REGISTERED IN CCR FOR CONSIDERATION OF FUTURE SOLICITATIONS, AWARDS AND PAYMENT. REGISTRATION IS REQUIRED PRIOR TO AWARD OF ANY CONTRACT, BASIC AGREEMENT, BASIC ORDERING AGREEMENT OR BLANKET PURCHASE AGREEMENT FROM A SOLICITATION ISSUED AFTER MAY 31, 1998. NO CONTRACT AWARD WILL BE MADE TO AN UNREGISTERED CONTRACTOR. INTERNET ACCESS ALLOWS YOU TO REGISTER BY COMPLETING AN ELECTRONIC ON-LINE REGISTRATION APPLICATION FROM CCR HOMEPAGE AT <http://www.ccr.gov/>. FOR FURTHER ASSISTANCE IN COMPLETING YOUR ON-LINE REGISTRATION, CONTACT THE NEAREST PROCUREMENT TECHNICAL ASSISTANCE CENTER (PTAC) NEAR YOU. A LIST OF THE NEAREST PTAC FOR THE STATE YOU ARE LOCATED AT: <http://www.rcacwv.com/ptac.htm>, or call Customer Assistance Center at (888) 227-2423.

**CONTRACTOR MUST PROVIDE DUN AND BRADSTREET NUMBER:**

If contractor does not have DUNS number, contractor may register in CCR to retrieve a number (see internet address above, or you may call 1-800-333-0505 or (610) 882-7000).

*\*\*This Request for Quotations (RFQ) is considered for Small Business Set-Aside Only; Large Business will not be considered. Awards for this solicitation will be made as Blanket Purchase Agreements in accordance with Federal Acquisition Regulations (FAR).*

***This Solicitation is an invitation for potential firms to submit a quote for Rehabilitation of Hydraulic Cylinders at Mud Mountain Dam.***

**NOTE:** Responses via Non-Facnet and Facnet will be accepted through the Seattle District office. EDI contractor MUST request for the Scope of Work. Failure to do so may result in rejection of offers. Upon requesting a copy of the RFQ, the point of contact is:

SANDRA THOMSON, Contract Specialist  
CONTRACTING WEB ADDRESS: <http://www.nws.usace.armv.mii/index.cfm>  
(Click on Contract and Bid Information) E-  
MAIL ADDRESS: Sandra.B.Thomson@usace.armv.mii ELEPHONE: (206)  
764-6865 FACSIMILE: (206)764-6817

**Representations and Certifications contained** herein must **be completed by quoters and returned** with **offers**. Please submit your completed Quotation, no later than the date stated above, to the address shown in Block 9, of the Standard Form (SF) 1449, Quotation/Contract/Order for Commercial Items. Facsimile quotes may be sent to the Seattle District, Corps of Engineers, Attention: Sandra Thomson at (206) 764-6817.

ANY AWARD MADE AS A RESULT OF THIS REQUEST FOR QUOTATION IS SUBJECT TO WAGE DETERMINATION NO.1994-2563.

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.212-1 INSTRUCTIONS TO OFFERORS--COMMERCIAL ITEMS (OCT 2000)

(a) North American Industry Classification System (NAICS) code and small business size standard. The NAICS code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;
- (3) The name, address, and telephone number of the offeror;
- (4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;
- (5) Terms of any express warranty;
- (6) Price and any discount terms;
- (7) "Remit to" address, if different than mailing address;
- (8) A completed copy of the representations and certifications at FAR 52.212-3;
- (9) Acknowledgment of Solicitation Amendments;

(10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late submissions, modifications, revisions, and withdrawals of offers:

(1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2)(i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting withdrawal is established and the person signs a receipt for the offer.

(g) Contract award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of requirements documents cited in the solicitation. (1) The Index of Federal Specifications, Standards and Commercial Item Descriptions and the documents listed in it may be obtained from the General Services Administration, Federal Supply Service Bureau, Specifications Section, Suite 8100, 470 L'Enfant Plaza, SW, Washington, DC 20407 ((202) 619-8925).

(2) The DOD Index of Specifications and Standards (DODISS) and documents listed in it may be obtained from the Standardization Documents Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 (telephone (215) 697-2569).

(i) Availability of requirements documents cited in the solicitation. (1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--GSA Federal Supply Service Specifications Section, Suite 8100, 470 East L'Enfant Plaza, SW, Washington, DC 20407, Telephone (202) 619-8925, Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at <http://assist.daps.mil>.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication, or maintenance.

(j) Data Universal Numbering System (DUNS) Number. (Applies to offers exceeding \$25,000.) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet to obtain one at no charge. An offeror within the United States may call 1-800-333-0505. The offeror may obtain more information regarding the DUNS number, including locations of local Dun and Bradstreet Information Services offices for offerors located outside the United States, from the Internet home page at <http://www.customerservice@dnb.com/>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at [globalinfo@mail.dnb.com](mailto:globalinfo@mail.dnb.com).

(End of provision)

52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS--COMMERCIAL ITEMS (JUL 2002)  
ALTERNATE I (APR 2002)

(a) Definitions. As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service-

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern--

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

\_\_\_ TIN:-----

\_\_\_ TIN has been applied for.

\_\_\_ TIN is not required because:

\_\_\_ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

\_\_\_ Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

\_\_\_ Sole proprietorship;

\_\_\_ Partnership;

\_\_\_ Corporate entity (not tax-exempt);

\_\_\_ Corporate entity (tax-exempt);

\_\_\_ Government entity (Federal, State, or local);

\_\_\_ Foreign government;

\_\_\_ International organization per 26 CFR 1.6049-4;

\_\_\_ Other-----

(5) Common parent.

\_\_\_ Offeror is not owned or controlled by a common parent;

\_\_\_ Name and TIN of common parent:

Name-----

TIN-----

(c) Offerors must complete the following representations when the resulting contract is to be performed inside the United States, its territories or possessions, Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) Veteran-owned small business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a veteran-owned small business concern.

(3) Service-disabled veteran-owned small business concern. (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents, for general statistical purposes, that it ( ) is, ( ) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents that it ( ) is, ( ) is not a women-owned small business concern.

Note: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) Women-owned business concern (other than small business concern). (Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents that it ( ) is, a women-owned business concern.

(7) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

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(8) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. (Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.)

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).) The offeror represents as part of its offer that it ( ) is, ( ) is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).) Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following):

Average Annual

Number of Employees Gross Revenues

50 or fewer  \$1 million or less

51 - 100  \$1,000,001 - \$2 million

101 - 250  \$2,000,001 - \$3.5 million

251 - 500  \$3,500,001 - \$5 million

501 - 750  \$5,000,001 - \$10 million

751 - 1,000  \$10,000,001 - \$17 million

Over 1,000  Over \$17 million

(9) (Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns or FAR 52.219-25, Small Disadvantaged Business Participation Program-Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)

(i) General. The offeror represents that either--

(A) It ( ) is, ( ) is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It ( ) has, ( ) (has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a

decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. (The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: \_\_\_\_\_.)

(10) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It ( ) is, ( ) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ( ) is, ( ) is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(11) (Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) or (c)(9) of this provision.) (The offeror shall check the category in which its ownership falls):

\_\_\_ Black American.

\_\_\_ Hispanic American.

\_\_\_ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

\_\_\_ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

\_\_\_ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

\_\_\_ Individual/concern, other than one of the preceding.

(d) Certifications and representations required to implement provisions of Executive Order 11246--

(1) Previous Contracts and Compliance. The offeror represents that--

(i) It ( ) has, ( ) has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the and

(ii) It ( ) has, ( ) has not, filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that--

(i) It ( ) has developed and has on file, ( ) has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR Subparts 60-1 and 60-2), or

(ii) It ( ) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act--Balance of Payments Program Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act--Balance of Payments Program--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product as defined in the clause of this solicitation entitled "Buy American Act--Supplies" and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

(2) Foreign End Products:

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) Buy American Act--North American Free Trade Agreement--Israeli Trade Act--Balance of Payments Program Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act" and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States.

(ii) The offeror certifies that the following supplies are NAFTA country end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

NAFTA Country or Israeli End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate I (May 2002). If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian End Products:

Line Item No.

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(List as necessary)

(3) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate II (May 2002). If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No.

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Country of Origin

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(List as necessary)

(4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or NAFTA country end product, as defined in the clause of this solicitation entitled ``Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products.

Other End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals --

(1) ( ) Are, ( ) are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; and

(2) ( ) Have, ( ) have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: Commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(3) ( ) Are, ( ) are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed end products.

Listed End Product

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Listed Countries of Origin

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 (2) Certification. (If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.)

( ) (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

( ) (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). The offeror certifies, to the best of its knowledge and belief, that--

(1) The offeror and/or any of its principals ( ) are, ( ) are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; and

(2) ( ) Have, ( ) have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and ( ) are, ( ) are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(End of provision)

#### 52.212-4 CONTRACT TERMS AND CONDITIONS-- COMMERCIAL ITEMS (FEB 2002)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized,) to the address designated in the contract to receive invoices. An invoice must include--

- (1) Name and address of the Contractor;
- (2) Invoice date;
- (3) Contract number, contract line item number and, if applicable, the order number;
- (4) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (5) Shipping number and date of shipment including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (6) Terms of any prompt payment discount offered;
- (7) Name and address of official to whom payment is to be sent; and
- (8) Name, title, and phone number of person to be notified in event of defective invoice.

Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. Contractors are encouraged to assign an identification number to each invoice.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

(End of clause)

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (APR 2003)

(a) The Contractor shall comply with the following FAR clauses, which are incorporated in this contract by reference, to implement provisions of law or executive orders applicable to acquisitions of commercial items:

(1) 52.222-3, Convict Labor (E.O. 11755).

(2) 52.233-3, Protest after Award (31 U.S.C. 3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer shall check as appropriate.)

\_\_\_ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C. 253g and 10 U.S.C. 2402).

\_\_\_ (2) 52.219-3, Notice of HUBZone Small Business Set-Aside (Jan 1999).

\_\_\_ (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).

\_\_\_ (4) (i) 52.219-5, Very Small Business Set-Aside (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).

\_\_\_ (ii) Alternate I to 52.219-5.

\_\_\_ (iii) Alternate II to 52.219-5.

\_X\_ (5) 52.219-8, Utilization of Small Business Concerns (15 U.S.C. 637 (d)(2) and (3)).

\_\_\_ (6) 52.219-9, Small Business Subcontracting Plan (15 U.S.C. 637 (d)(4)).

\_X\_ (7) 52.219-14, Limitations on Subcontracting (15 U.S.C. 637(a)(14)).

\_\_\_ (8)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Concerns (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).

\_\_\_ (ii) Alternate I of 52.219-23.

\_\_\_ (9) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).

\_\_\_ (10) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).

\_X\_ (11) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).

(12) 52.222-26, Equal Opportunity (E.O. 11246).

(13) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212).

(14) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793).

(15) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212).

(16) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (E.O. 13126).

(17)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (42 U.S.C. 6962(c)(3)(A)(ii)).

(ii) Alternate I of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).

(18) 52.225-1, Buy American Act--Supplies (41 U.S.C. 10a-10d).

(19)(i) 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note).

(ii) Alternate I of 52.225-3.

(iii) Alternate II of 52.225-3.

(20) 52.225-5, Trade Agreements (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

(21) 52.225-13, Restriction on Certain Foreign Purchases (E.O. 12722, 12724, 13059, 13067, 13121, and 13129).

(22) 52.225-15, Sanctioned European Union Country End Products (E.O. 12849).

(23) 52.225-16, Sanctioned European Union Country Services (E.O. 12849).

(24) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (31 U.S.C. 3332).

(25) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (31 U.S.C. 3332).

(26) 52.232-36, Payment by Third Party (31 U.S.C. 3332).

(27) 52.239-1, Privacy or Security Safeguards (5 U.S.C. 552a).

(28) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241).

Alternate I of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, which the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer check as appropriate.)

(1) 52.222-41, Service Contract Act of 1965, As amended (41 U.S.C. 351, et. seq.).

(2) 52.222-42, Statement of Equivalent Rates for Federal Hires (29 U.S.C. 206 and 41 U.S.C. 351, et. seq.).

(3) 52.222-43, Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) (29 U.S.C.206 and 41 U.S.C. 351, et seq.).

(4) 52.222-44, Fair Labor Standards Act and Service Contract Act - Price Adjustment (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

(5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C. 351, et seq.).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components--

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212);

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793);

(4) 52.247-64, Preference for Privately-Owned U.S.- Flag Commercial Vessels (46 U.S.C. Appx 1241 and 10 U.S.C. 2631)(flow down required in accordance with paragraph (d) of FAR clause 52.247-64),, and

(5) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C. 351, et seq.).

(End of clause)

Award (52.214-4021)

Notwithstanding any other provisions of this solicitation, the Government intends to make award to only one bidder. Failure to include a price for all items in the schedule will result in the bid/offer being rejected as nonresponsive.

52.236-13 ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

52.246-4 INSPECTION OF SERVICES--FIXED-PRICE (AUG 1996)

- (a) Definitions. "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.
- (e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.
- (f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

(End of clause)

#### 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

[Insert one or more Internet addresses]

(End of provision)

#### 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

[Insert one or more Internet addresses]

(End of clause)

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application

through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

(End of clause)

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (MAR 2003)

(a) The Contractor agrees to comply with the following Federal Acquisition Regulation (FAR) clause which, if checked, is included in this contract by reference to implement a provision of law applicable to acquisitions of commercial items or components.

52.203-3 Gratuities (APR 1984) (10 U.S.C. 2207).

(b) The Contractor agrees to comply with any clause that is checked on the following list of Defense FAR Supplement clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components.

252.205-7000 Provision of Information to Cooperative Agreement Holders (DEC 1991) (10 U.S.C. 2416).

252.206-7000 Domestic Source Restriction (DEC 1991) (10 U.S.C. 2304)

252.219-7003 Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DoD Contracts) (APR 1996) (15 U.S.C. 637).

252.219-7004 Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997) (15 U.S.C. 637 note).

252.225-7001 Buy American Act and Balance of Payment Program (MAR 1998) (41 U.S.C. 10a-10d, E.O. 10582).

252.225-7012 Preference for Certain Domestic Commodities (FEB 2003) (10 U.S.C. 2533a).

252.225-7014 Preference for Domestic Specialty Metals (MAR 1998) (10 U.S.C. 2533a).

252.225-7015 Preference for Domestic Hand or Measuring Tools (DEC 1991) (10 U.S.C. 2533a).

252.225-7016 Restriction on Acquisition of Ball and Roller Bearings (DEC 2000) ( Alternate I) (DEC 2000) (Section 8064 of Pub. L. 106-259).

252.225-7021 Trade Agreements (OCT 2002) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).

252.225-7027 Restriction on Contingent Fees for Foreign Military Sales (MAR 1998) (22 U.S.C. 2779).

\_\_\_\_ 252.225-7028 Exclusionary Policies and Practices of Foreign Governments (DEC 1991) (22 U.S.C. 2755).

\_\_\_\_ 252.225-7029 Preference for United States or Canadian Air Circuit Breakers (AUG 1998) (10 U.S.C. 2534(a)(3)).

\_\_\_\_ 252.225-7036 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payment Program (MAR 1998) (\_\_\_\_Alternate I) (SEP 1999) (41 U.S.C. 10a-10d and 19 U.S.C. 3301 note).

X  252.227-7015 Technical Data--Commercial Items (NOV 1995) (10 U.S.C. 2320).

\_\_\_\_ 252.227-7037 Validation of Restrictive Markings on Technical Data (SEP 1999) (10 U.S.C. 2321).

\_\_\_\_ 252.232-7003 Electronic Submission of Payment Requests (MAR 2003) (10 U.S.C. 2227).

X  252.243-7002 Certification of Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).

\_\_\_\_ 252.247-7023 Transportation of Supplies by Sea (MAY 2002) (\_\_\_\_Alternate I) (MAR 2000) (\_\_\_\_Alternate II) (MAR 2000) Alternate III) (MAY 2002) (10 U.S.C. 2631).

\_\_\_\_ 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

(c) In addition to the clauses listed in paragraph (e) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items clause of this contract (Federal Acquisition Regulation 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014 Preference for Domestic Specialty Metals, Alternate I (MAR 1998) (10 U.S.C. 2533a).

252.247-7023 Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).

252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631)

(End of clause)

#### 252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES-DOD CONTRACTS (SEP 2001)

(a) Definitions. As used in this clause--

“Indian” means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any “Native” as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

“Indian organization” means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17.

“Indian-owned economic enterprise” means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

“Indian tribe” means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452 (c).

“Interested party” means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contract shall use its best efforts to give Indian organizations and Indian-owned economic enterprises the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless and interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer. No incentive payment will be made--

(1) Within 59 working days of subcontract award;

(2) While a challenge is pending; or

(3) If a subcontractor is determined to be an ineligible participant.

(e)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of cost-type contract.

(ii) The target cost of a cost-plus-incentive-fee contract.

(iii) The target cost and ceiling price of a fixed-price incentive contract.

(iv) The price of a firm-fixed-price contract.

(2) The amount of the adjustment that may be made to the contract is 5 percent of the estimated cost, target cost, or firm-fixed price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(3) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(4) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor.

(5) If the Contractor requests and receives an adjustment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the adjustment.

(f) The Contractor shall insert the substance of this clause, including this paragraph (f), in all subcontracts that--

(1) Are for other than commercial items; and

(2) Are expected to exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(End of clause)

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## SECTION C

### DESCRIPTIONS/SPECIFICATIONS/WORK STATEMENT

#### C01 SCOPE OF WORK.

The Contractor shall provide all technical expertise, planning, supervision, labor, equipment, transportation, procurement services, and other resources for the disassembly, rehabilitation, reassembly and testing of the hydraulic gate cylinder equipment, and installation of position indicator system and associated work at Mud Mountain Dam on the White River. The location of these facilities is described in the contract drawings attached to this contract. See list of drawings under Attachment J03 Drawing Index. Reference drawings are provided for general information concerning existing equipment as listed under Attachment J03. The Contractor is responsible for performing all work in accordance with the specifications, contract drawings, requirements and operations as generally described in the Performance Work Statement that is made a part of this contract.

#### C02 PERFORMANCE WORK STATEMENT

The Performance Work Statement (PWS), consisting of the technical specifications and technical exhibits thereto required for this work is made a part hereof Section C. The PWS is bound in the contract documents after SECTION I CONTRACT CLAUSES.

#### C03 EXTENT OF SERVICES

The detailed requirements for the services listed in the Schedule of Supplies or Services and Prices/Costs are covered under the Performance Work Statement and contract drawings.

#### C04 DEFINITIONS

##### (a) Directed, Required, Ordered, Designated, Prescribed

Wherever in the specifications or upon the drawings the words "directed," "required," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the "direction," "requirement," "order," "designation," or "prescription" of the Contracting Officer is intended and similarly the words "approved," "acceptable," "satisfactory," or words of like import shall mean "approved by," or "acceptable to," or "satisfactory to" the Contracting Officer unless otherwise expressly stated.

##### (b) As Shown, As Indicated, As Detailed

Where "as shown," "as indicated," "as detailed," or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provided complete in-place," that is "furnished and installed." (FAR 52.236-21 (b and c).)

(c) Contracting Officer (CO), Contracting Officer's Representative (COR)

Wherever in these specifications or upon the drawings the words "Contracting Officer" (CO) or "Contracting Officer's Representative" (COR), are used, it shall be understood to also mean "Government" unless otherwise expressly stated.

(d) Government Quality Assurance Representative (GQAR)

Wherever in these specifications the word "GQAR" is used, it shall be understood to mean "Government Quality Assurance Representative," unless otherwise stated.

(e) Weekend(s)

Wherever in these specifications the word "weekend(s)" is used, it shall be understood to mean "Saturday, Sunday and Federal Holidays," unless otherwise expressly stated.

(f) Miscellaneous Terms and Abbreviations

Refer to Section 01100 DEFINITIONS AND TERMS (under the PWS) for descriptions of other terms and abbreviations used in the contract documents.

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## SECTION E

### INSPECTION AND ACCEPTANCE

#### **E01 52.246-4 INSPECTION OF SERVICES--FIXED-PRICE (AUG 1996)**

- (a) Definitions. "Services," as used in this Clause, includes service performed, workmanship, and material furnished or utilized in the performance of services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.
- (e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.
- (f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

(End of clause )

#### **E02 INSPECTION AND ACCEPTANCE.**

Inspection and acceptance of the Services will be performed at Mud Mountain Dam or at fabricators' facilities by Government Quality Assurance Evaluators.

##### **E02.1 PROVISIONAL ACCEPTANCE**

Following satisfactory completion of all tests and trials at the fabricator's yard, and correction of all "punch list" deficiencies, certain items of work designated by the CO may be Provisionally Accepted at the fabricator's facilities. Delivery of the designated systems and equipment may not be started until Provisional Acceptance of such items has been made. Payment will be made in accordance with the Progress Payments Clause of Section I at the time of Provisional Acceptance less any retainage and any liquidated damages.

**E02.2 FINAL INSPECTION**

When all work has been performed and installed at the project site and testing completed, and upon receipt of all contract deliverables, the Contractor and the Contracting Officer's Representative (COR) shall make a complete physical inspection and inventory of the work. A "punch list" of deficiencies will be developed and presented to the Contractor for corrective action. All corrective action necessary to eliminate the "punch list" shall be completed. The Contractor shall give the COR two working days notice prior to the desired date of reinspection. Prior to any inspection, the project site and all equipment installed under this contract shall be thoroughly cleaned and all painting and finishes put in first class condition.

**E02.3 FINAL ACCEPTANCE**

Final Acceptance will be made upon satisfactory installation of the equipment and systems "Ready for Service" at the delivery point designated and following successful completion of the Final Acceptance Demonstrations. "Ready for Service" is defined as work areas clean; all trash, and delivery related material disposed of; loose items in place; all electrical and mechanical systems operational; equipment properly adjusted; instruments and electronics calibrated or aligned, and damaged paint touched up.

**E03 QUALITY ASSURANCE SURVEILLANCE PLAN**

The Quality Assurance Surveillance Plan with Performance Requirements Summary, is attached as Technical Exhibit 1 to Section C Performance Work Statement and identifies the key service outputs and surveillance methods the Government will use to evaluate the Contractor's success in meeting the performance standards. The Contractor's performance will be evaluated based on an Acceptable Quality Level (AQL) for each of the specified outputs. The AQL represents the maximum number of defects for which the associated item is considered to be acceptable.

**E04 CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM**

Reductions for Unsatisfactory or Nonperformed Work: The Government may, in accordance with Clauses E01 through E03 above, deduct an amount equal to the value of the unsatisfactory or non performed work, as determined by the Contracting Officer using the procedures described in Performance Requirements Summary (PRS) under Technical Exhibit 1, from any payment due the Contractor. In the event the Contractor disagrees with the Contracting Officer as to any reduction, such disagreement shall be subject to the contract clause entitled "Disputes".

**END OF SECTION E**

## SECTION F

### DELIVERIES OR PERFORMANCE

#### F01 CONTRACT PERIOD(S)

(a.) Any contract awarded hereunder shall commence on date of award, and work shall be completed according to the following schedule, unless extended pursuant to contract clause FAR 52.217-8 or FAR 52.217-9.

**For CLINs 0001 through 0007 - complete work not later than 30 September 2004.**

**For CLIN 0008 (see specification requirements)**

(b) The delivery dates or specific periods above are based on the assumption that the Government will make award by 30 June 2003. Each delivery date in the delivery schedule above will be extended by the number of calendar days after the above date(s) that the contract is in fact awarded provided, that the Contractor promptly acknowledges receipt of notice of award, except the following limitations apply: Due to the operating requirements for the dam the dates of shutdown available for removal and reinstallation of the hydraulic cylinders may be restricted due to stream flow conditions. In such an event the Government may require a new delivery schedule for performing such work.

(c.) This work is subject to sequencing requirements specified under Section 01145 SITE SPECIFIC SUPPLEMENTARY REQUIREMENTS of the Performance Work Statement.

#### F02 PLACE OF PERFORMANCE

Services under this contract are required to be performed at the following location: Mud Mountain Dam White River, Washington.

#### 52.242-15 STOP-WORK ORDER (AUG 1989)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

- (1) Cancel the stop-work order; or
- (2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable

adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(End of clause)

#### 52.242-17 GOVERNMENT DELAY OF WORK (APR 1984)

(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or impliedly authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved, and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

(End of clause)

END OF SECTION F

SECTION H

SPECIAL CONTRACT REQUIREMENTS

PARAGRAPH NO.	PARAGRAPH TITLE
H01	PROVISION ON CONTRACTING OFFICER'S AUTHORITY
H02	SUPERVISION
H03	SUBCONTRACTOR
H04	SITE CONDITIONS
H05	INSURANCE
H06	SERVICES BEYOND THE ORIGINAL SCOPE OF WORK
H07	APPROVALS BY GOVERNMENT
H08	CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS
H09	EXISTING DRAWINGS AND DETAILS
H10	TOOLS AND EQUIPMENT
H11	GOVERNMENT-FURNISHED RESOURCES
H12	PERSONNEL EXPERIENCE AND SKILL REQUIREMENTS
H13	BRAND NAME OR EQUAL

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## SECTION H

## SPECIAL CONTRACT REQUIREMENTS

## H01 PROVISION ON CONTRACTING OFFICER'S AUTHORITY

No oral statement of any person whomever shall, in any manner or degree, modify or otherwise affect the terms of this contract. The Contracting Officer is the only person authorized to approve changes in any of the requirements and/or terms of this contract and notwithstanding terms contained elsewhere, the said authority remains solely with the Contracting Officer. In the event the contractor effects a change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority, and no adjustment will be made in the contract price to cover any increase in costs incurred.

## H02 SUPERVISION

The Government shall not exercise any supervision or control over the contractor's employees performing services under this contract. Such employees shall be accountable not to the Government, but solely to the contractor, who in turn, is responsible to the Government.

## H03 SUBCONTRACTOR

a. Provisions in Subcontract. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relating to this contract, and insure sufficient fulfillment by subcontractors of all contractual provisions.

b. Relationship Between Subcontractor and Government. Nothing contained in this contract shall be construed as a contractual relationship between any subcontractor and the Government.

c. Approval of Subcontractors. Prior to award of any contract in which subcontractors will be utilized, the Contractor shall provide, in writing, a list of all the subcontractors, a statement to the extent and character of the work to be done under subcontract and the following information:

1) Name and designation.

2) Experience with respect to performing their element(s) of work as referenced in the contract drawings and specifications.

d. Once a subcontractor is submitted with a proposal, and award has been made, the contractor cannot change subcontractors unless justification has been made in writing and Contracting Officer approves.

#### H04 SITE CONDITIONS

(a.) Transportation Facilities. The Contractor shall make its own investigation of the conditions of existing public and private roads and of clearances, restrictions, bridge load limits and other limitations affecting transportation and ingress and egress at the job site.

(b.) The Contractor may transport onto the site, such necessary temporary facilities as trailers for field offices and storage, to be located where approved by the Contracting Officer.

#### H05 INSURANCE

##### (a) Minimum Requirements.

The Contractor shall maintain, during the entire period of performance under the contract, and provide certified proof that the contractor's organization carries the following minimum insurance:

1. Workman's Compensation and Employer's Liability Insurance. Contractor shall comply with all applicable Workmen's Compensation Statutes of the State of Washington and shall furnish evidence of employer's liability insurance in the amount not less than \$100,000.

2. General Liability Insurance. Bodily injury liability insurance in the minimum amount of \$5,000,000 per occurrence and property damage insurance of \$1,000,000 per occurrence, with both on a comprehensive form of policy.

3. Automobile Liability Insurance. Minimum limits of \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. This insurance shall be on a comprehensive form of policy and shall cover the operation of all vehicles used in the performance of the contract.

##### (b) Certification.

Prior to the commencement of work under the contract, the Contractor shall furnish to the Contracting Officer a certificate or written statement of compliance with the insurance requirements listed above. The policies evidencing the required insurance shall contain an endorsement to the effect that cancellation of or any material change in the policies adversely affecting the interests of the Government shall not be effective for such period as may be prescribed by the laws of the State of Washington and, in no event, less than thirty (30) days after the Contracting Officer has been notified in writing of the change or cancellation.

##### (c) Subcontractor Requirements.

The Contractor shall require all subcontractors who will perform work on a Government site to procure and maintain during the entire period of their performance the insurance required in Paragraph H05. The Contractor shall furnish, or assure that there has been furnished, to the COR a current Certificate of Insurance for each such first-tier subcontractor at least five (5) days prior to entry of each subcontractor's personnel on the Government project site.

## H06 SERVICES BEYOND THE ORIGINAL SCOPE OF WORK

The Contractor is advised not to perform any extra services under this contract requested by any person, orally or in writing, which the Contractor considers to be a change in work or services required and which necessitates an adjustment in the contract price, until the Contractor has been requested by the Contracting Officer to: (a) make a written proposal covering such extra services; and (b) has negotiated a mutually satisfactory price and received a written modification signed by the Contracting Officer. Any such extra services executed by the Contractor without the appropriate written notice is undertaken at its own risk and expense.

## H07 APPROVALS BY GOVERNMENT

Unless expressly stipulated elsewhere in this contract as being excepted from this provision, wherever this contract provides for submittal of designs, components, or other items for approval of the Contracting Officer or other authorized Government representative, such approvals shall not be construed as a complete check as to the adequacy of said design or item, nor as an agreement that the design or item will meet the requirements of the technical specifications. Such approvals are for the purpose of ensuring Government knowledge of Contractor's plans and progress and will indicate only that the Contractor's general approach toward meeting contractual requirements is satisfactory. Such approvals shall in no way relieve the Contractor of the responsibility for any error or deficiency which may exist in the submitted design or other item, as the Contractor shall be responsible for meeting all the requirements of the contract.

## H08 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)(DOD FAR SUPP 252.236-7001)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors which might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general—

- (1) Large scale drawings shall govern small scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified in the Index of Drawings under Section J, Attachment J03.

#### H09 EXISTING DRAWINGS AND DETAILS

Existing (Reference) drawings are furnished for information only. The Government makes no representation as to the completeness or accuracy of these drawings. Minor deviations can be anticipated and shall not be the basis for a claim for extra compensation. The operation of this facility is ongoing and includes updating and repair of existing systems and equipment. The Contractor shall update the existing drawings to reflect all changes implemented during the contract period in accordance with Section 01780 RECORD DRAWINGS included under the Performance Work Statement.

#### H10 TOOLS AND EQUIPMENT

The Contractor shall furnish all vehicles, tools and equipment necessary to accomplish all work required by these specifications other than that furnished by the Government in accordance with paragraph H11.

#### H11 GOVERNMENT-FURNISHED RESOURCES

The Government will furnish the following resources to the Contractor for his/her use in the execution of the requirements of this contract. The Contractor shall not utilize these resources for any purpose than contract execution.

##### (a) Staging Area

The Government will furnish open staging area for storage space. The Contractor shall not make any alterations to the space or grounds except in accordance with performing the work and providing the services specified, or with the permission of the COR. Any approved Contractor-requested alterations shall be made at no additional cost to the Government.

##### (b) Additional Storage Space

If the Contractor desires additional storage space, he/she may provide portable buildings at his/her own expense. Any utility hookups required for such buildings shall also be provided at his/her expense. The amount, type, location, and methods used to install any portable buildings shall be subject to the COR's approval.

##### (c) Project Crane

See requirements under Section 01145 SITE SPECIFIC SUPPLEMENTARY REQUIREMENTS.

(d) Utility Services

See requirements under Section 01501 TEMPORARY FACILITIES AND CONTROLS.

## H12 PERSONNEL EXPERIENCE AND SKILL REQUIREMENTS

### H12.1 General.

All personnel utilized by the Contractor in the performance of work required by these specifications shall be experienced, trained and proficient in the trades and skills required to perform the work required by these specifications.

### H12.2 Experience and Skill Requirements for Maintenance Personnel.

All personnel engaged in the maintenance and repair of gate equipment shall be at the journeyman skill level for the trades involved. Apprentices and trainees shall not maintain or repair any gate equipment without technical direction and oversight by a journeyman in the appropriate trade.

### H12.3 Project Management

Within five calendar days from the date of award, the Contractor shall designate the following project management personnel and submit a resume for each required position.

(a) Contract Manager

The Contractor shall provide a Contract Manager (CM) to oversee and coordinate the work described in the CONTRACT DOCUMENTS. The contractor shall also designate one alternate who shall act for the Contractor when the Contract Manager is absent. The Contract Manager shall be competent, experienced and knowledgeable in management of work similar to the specific activities identified in this contract. The Contract Manager shall be employed by the prime contractor for this Contract.

(1) Contract Manager Qualifications

- (i) A minimum of five (5) years experience in project management.
- (ii) The proven ability to effectively communicate and manage customer expectations.
- (iii) The proven ability to locate, coordinate, and utilize resources within their own organization.

(2) Contract Manager Responsibilities.

Specific Contract Manager responsibilities include but are not limited to the following:

(i) Have full authority to act for the Contractor on all matters relating to the overall execution of the contract.

(ii) Maintain close communication and coordination with the Government; report any and all problems encountered in work activities; implement any special procedures specified by the Government. As part of this close communication, the Contract Manager shall attend "Monthly Status Meetings" at the Contractor's main office or at the Site Manager's office utilizing this Contract. The purpose of this meeting is to evaluate the progress of contract activities, special coordination activities, problems incurred, and policy or procedural changes. The Contract Manager shall attend site visits when appropriate.

(ii) Retain and manage the distribution of personnel, equipment, and materials so that all work is performed within the schedule specified.

(iv) Negotiate, receive, acknowledge, approve, and implement orders issued by the Contracting Officer.

(v) Take immediate corrective action, when performance is not acceptable to the Government.

(vi) Develop procedures and forms as necessary to ensure uniform record keeping and program management documentation.

(vii) Develop, implement, and manage a quality control program that will ensure that all factory product and installation quality measures are obtained.

(viii) Implement a comprehensive safety program.

(b) Site Superintendent

The Contractor shall provide an on-site Site Superintendent to oversee and coordinate the daily work activities described in the CONTRACT DOCUMENTS.

(1) Site Superintendent Qualifications

The work site superintendent shall have, as a minimum, the following qualifications:

(i) The ability to supervise all site work activities.

(ii) The technical knowledge in all portions of the site work.

(iii) Be trained in any specific OSHA-regulated activities, such as lockout/tagout or confined space entry, as needed.

(iv) knowledge of applicable Federal, state, and local laws and regulations.

(g) Work experience with the proven ability to effectively manage subcontracts.

(2) Site Superintendent Responsibilities

Specific Site Superintendent responsibilities include but are not limited to the following:

(i) Being present at the site during all regular work shift hours for all stages and phases of the contract. The Site Superintendent or a designated alternate must be on site daily during all regular work shift hours unless otherwise approved by GQAR. Failure to do this will result in poor performance rating.

(ii) The authority to supervise all site work activities involved in completing the daily O&M responsibilities.

(iii) Maintaining close communication and coordination with the Government for the duration of the contract period, including reporting of any and all problems encountered.

(iv) Ensuring that all site work is performed in accordance with applicable specifications and regulations.

(v) Preparing daily logs of the accomplished work.

(c) Assignment of Personnel

(1) The Contract Manager or alternate(s), may also perform regular duties as Site Superintendent for this Contract if qualified for such duties.

(2) In addition to duties as either the Contract Manager or alternate(s), or Site Superintendent, the Contract Manager or the Site Superintendent may also perform regular duties as a "CQC Manager" for this Contract if qualified for such duties.

(d) The Contractor shall provide a reliable means for the Government to contact these individuals at any time. These means shall include off-duty telephone numbers and cellular telephone numbers. The Contractor shall ensure that his/her means of communication with the Government will allow voice contact to be made with at least one of these individuals at any and all times. The use of electronic paging systems will satisfy this requirement if the paging system is reliable at all locations and also if either the Contractor or his/her designated representative will respond to all pages within sixty (60) minutes. The Government may routinely test the Contractor's communications systems to determine compliance with this requirement.

### H13 BRAND NAME OR EQUAL

References in the specifications to equipment, materials, articles, or patented processes by trade name, make, or catalog number shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at his/her option, use any material, equipment, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specification, unless otherwise specifically provided in this contract.

END OF SECTION

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WAGE DETERMINATION NO: 94-2563 REV (22) AREA: WA,SEATTLE

WAGE DETERMINATION NO: 94-2563 REV (22) AREA: WA,SEATTLE

REGISTER OF WAGE DETERMINATIONS UNDER | U.S. DEPARTMENT OF LABOR  
\*\*\*FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU WITH DOL\*\*\*  
WASHINGTON D.C. 20210

William W.Gross | Division of | Wage Determination No.: 1994-2563  
Director | Wage Determinations | Revision No.: 22  
Date Of Last Revision: 10/09/2002

State: Washington Area: Washington Counties of King, Snohomish, Whatcom

\*\*Fringe Benefits Required Follow the Occupational Listing\*\*

OCCUPATION TITLE	MINIMUM WAGE RATE
Administrative Support and Clerical Occupations	
Accounting Clerk I	10.81
Accounting Clerk II	12.13
Accounting Clerk III	14.11
Accounting Clerk IV	16.28
Court Reporter	14.40
Dispatcher, Motor Vehicle	14.40
Document Preparation Clerk	12.37
Duplicating Machine Operator	12.37
Film/Tape Librarian	13.09
General Clerk I	8.76
General Clerk II	9.71
General Clerk III	13.68
General Clerk IV	15.04
Housing Referral Assistant	16.86
Key Entry Operator I	10.40
Key Entry Operator II	12.69
Messenger (Courier)	9.84
Order Clerk I	11.11
Order Clerk II	14.69
Personnel Assistant (Employment) I	11.55
Personnel Assistant (Employment) II	12.96
Personnel Assistant (Employment) III	14.42
Personnel Assistant (Employment) IV	16.80
Production Control Clerk	17.59
Rental Clerk	12.12
Scheduler, Maintenance	13.94
Secretary I	13.66
Secretary II	13.84
Secretary III	15.39
Secretary IV	19.75
Secretary V	24.91
Service Order Dispatcher	13.05
Stenographer I	12.96
Stenographer II	14.79
Supply Technician	19.90
Survey Worker (Interviewer)	14.16
Switchboard Operator-Receptionist	10.94

Test Examiner	14.40
Test Proctor	14.40
Travel Clerk I	11.10
Travel Clerk II	11.95
Travel Clerk III	12.62
Word Processor I	12.37
Word Processor II	14.79
Word Processor III	18.65
Automatic Data Processing Occupations	
Computer Data Librarian	12.65
Computer Operator I	13.61
Computer Operator II	14.63
Computer Operator III	17.60
Computer Operator IV	19.89
Computer Operator V	22.02
Computer Programmer I (1)	14.08
Computer Programmer II (1)	18.02
Computer Programmer III (1)	24.05
Computer Programmer IV (1)	25.04
Computer Systems Analyst I (1)	23.36
Computer Systems Analyst II (1)	26.42
Computer Systems Analyst III (1)	27.62
Peripheral Equipment Operator	14.70
Automotive Service Occupations	
Automotive Body Repairer, Fiberglass	21.30
Automotive Glass Installer	19.94
Automotive Worker	19.94
Electrician, Automotive	20.60
Mobile Equipment Servicer	18.61
Motor Equipment Metal Mechanic	21.30
Motor Equipment Metal Worker	19.94
Motor Vehicle Mechanic	21.24
Motor Vehicle Mechanic Helper	17.93
Motor Vehicle Upholstery Worker	19.28
Motor Vehicle Wrecker	19.94
Painter, Automotive	20.60
Radiator Repair Specialist	19.94
Tire Repairer	16.61
Transmission Repair Specialist	21.30
Food Preparation and Service Occupations	
Baker	12.65
Cook I	11.03
Cook II	11.82
Dishwasher	9.55
Food Service Worker	9.38
Meat Cutter	14.95
Waiter/Waitress	11.91
Furniture Maintenance and Repair Occupations	
Electrostatic Spray Painter	21.06
Furniture Handler	16.94
Furniture Refinisher	21.06
Furniture Refinisher Helper	18.25
Furniture Repairer, Minor	19.54
Upholsterer	21.06
General Services and Support Occupations	
Cleaner, Vehicles	10.33
Elevator Operator	10.38

Gardener	12.10
House Keeping Aid I	8.97
House Keeping Aid II	10.12
Janitor	10.38
Laborer, Grounds Maintenance	11.83
Maid or Houseman	8.97
Pest Controller	13.39
Refuse Collector	10.79
Tractor Operator	12.23
Window Cleaner	10.89
Health Occupations	
Dental Assistant	13.44
Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	14.23
Licensed Practical Nurse I	13.30
Licensed Practical Nurse II	14.93
Licensed Practical Nurse III	16.71
Medical Assistant	11.94
Medical Laboratory Technician	13.13
Medical Record Clerk	12.97
Medical Record Technician	14.57
Nursing Assistant I	7.54
Nursing Assistant II	9.28
Nursing Assistant III	10.62
Nursing Assistant IV	12.55
Pharmacy Technician	13.43
Phlebotomist	10.89
Registered Nurse I	20.30
Registered Nurse II	24.76
Registered Nurse II, Specialist	24.76
Registered Nurse III	29.43
Registered Nurse III, Anesthetist	29.43
Registered Nurse IV	32.95
Information and Arts Occupations	
Audiovisual Librarian	15.88
Exhibits Specialist I	17.94
Exhibits Specialist II	20.46
Exhibits Specialist III	25.16
Illustrator I	17.52
Illustrator II	19.98
Illustrator III	24.58
Librarian	24.06
Library Technician	14.86
Photographer I	14.55
Photographer II	18.36
Photographer III	20.53
Photographer IV	25.25
Photographer V	31.04
Laundry, Dry Cleaning, Pressing and Related Occupations	
Assembler	8.15
Counter Attendant	8.15
Dry Cleaner	10.35
Finisher, Flatwork, Machine	8.15
Presser, Hand	8.15
Presser, Machine, Drycleaning	8.15
Presser, Machine, Shirts	8.15
Presser, Machine, Wearing Apparel, Laundry	8.15
Sewing Machine Operator	11.09

Tailor	11.83
Washer, Machine	8.88
Machine Tool Operation and Repair Occupations	
Machine-Tool Operator (Toolroom)	21.09
Tool and Die Maker	23.67
Material Handling and Packing Occupations	
Forklift Operator	17.65
Fuel Distribution System Operator	18.70
Material Coordinator	18.01
Material Expediter	18.01
Material Handling Laborer	15.16
Order Filler	11.48
Production Line Worker (Food Processing)	15.63
Shipping Packer	14.33
Shipping/Receiving Clerk	14.33
Stock Clerk (Shelf Stocker; Store Worker II)	15.07
Store Worker I	12.36
Tools and Parts Attendant	18.57
Warehouse Specialist	16.71
Mechanics and Maintenance and Repair Occupations	
Aircraft Mechanic	21.71
Aircraft Mechanic Helper	18.25
Aircraft Quality Control Inspector	27.53
Aircraft Servicer	19.54
Aircraft Worker	20.41
Appliance Mechanic	21.06
Bicycle Repairer	18.25
Cable Splicer	25.98
Carpenter, Maintenance	21.66
Carpet Layer	24.05
Electrician, Maintenance	25.80
Electronics Technician, Maintenance I	21.05
Electronics Technician, Maintenance II	22.59
Electronics Technician, Maintenance III	27.85
Fabric Worker	19.54
Fire Alarm System Mechanic	21.71
Fire Extinguisher Repairer	18.89
Fuel Distribution System Mechanic	21.71
General Maintenance Worker	17.86
Heating, Refrigeration and Air Conditioning Mechanic	22.88
Heavy Equipment Mechanic	21.71
Heavy Equipment Operator	23.43
Instrument Mechanic	21.71
Laborer	11.17
Locksmith	20.96
Machinery Maintenance Mechanic	21.75
Machinist, Maintenance	20.97
Maintenance Trades Helper	17.93
Millwright	24.28
Office Appliance Repairer	21.06
Painter, Aircraft	21.06
Painter, Maintenance	21.06
Pipefitter, Maintenance	25.13
Plumber, Maintenance	23.38
Pneudraulic Systems Mechanic	21.71
Rigger	21.71
Scale Mechanic	20.41

Sheet-Metal Worker, Maintenance	21.71
Small Engine Mechanic	18.55
Telecommunication Mechanic I	21.71
Telecommunication Mechanic II	22.37
Telephone Lineman	21.71
Welder, Combination, Maintenance	21.71
Well Driller	21.71
Woodcraft Worker	21.71
Woodworker	18.89
Miscellaneous Occupations	
Animal Caretaker	10.90
Carnival Equipment Operator	10.66
Carnival Equipment Repairer	11.07
Carnival Worker	9.38
Cashier	10.49
Desk Clerk	10.81
Embalmer	20.16
Lifeguard	9.70
Mortician	19.34
Park Attendant (Aide)	12.18
Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	11.92
Recreation Specialist	14.96
Recycling Worker	12.29
Sales Clerk	12.14
School Crossing Guard (Crosswalk Attendant)	10.16
Sport Official	10.04
Survey Party Chief (Chief of Party)	21.28
Surveying Aide	12.26
Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	16.80
Swimming Pool Operator	14.18
Vending Machine Attendant	13.52
Vending Machine Repairer	13.64
Vending Machine Repairer Helper	13.52
Personal Needs Occupations	
Child Care Attendant	8.83
Child Care Center Clerk	11.01
Chore Aid	9.06
Homemaker	15.35
Plant and System Operation Occupations	
Boiler Tender	23.01
Sewage Plant Operator	22.35
Stationary Engineer	23.01
Ventilation Equipment Tender	18.25
Water Treatment Plant Operator	23.20
Protective Service Occupations	
Alarm Monitor	15.95
Corrections Officer	18.69
Court Security Officer	23.51
Detention Officer	23.51
Firefighter	23.53
Guard I	8.56
Guard II	15.40
Police Officer	23.48
Stevedoring/Longshoremen Occupations	
Blocker and Bracer	17.39
Hatch Tender	17.39
Line Handler	17.39

Stevedore I	15.28
Stevedore II	16.33
Technical Occupations	
Air Traffic Control Specialist, Center (2)	29.03
Air Traffic Control Specialist, Station (2)	20.02
Air Traffic Control Specialist, Terminal (2)	22.05
Archeological Technician I	15.83
Archeological Technician II	17.71
Archeological Technician III	21.93
Cartographic Technician	21.52
Civil Engineering Technician	22.12
Computer Based Training (CBT) Specialist/ Instructor	23.42
Drafter I	13.24
Drafter II	15.55
Drafter III	20.19
Drafter IV	21.93
Engineering Technician I	14.80
Engineering Technician II	16.61
Engineering Technician III	19.95
Engineering Technician IV	24.62
Engineering Technician V	29.65
Engineering Technician VI	35.87
Environmental Technician	19.26
Flight Simulator/Instructor (Pilot)	26.42
Graphic Artist	23.71
Instructor	19.36
Laboratory Technician	16.13
Mathematical Technician	20.53
Paralegal/Legal Assistant I	14.31
Paralegal/Legal Assistant II	17.66
Paralegal/Legal Assistant III	19.49
Paralegal/Legal Assistant IV	26.11
Photooptics Technician	20.53
Technical Writer	22.52
Unexploded (UXO) Safety Escort	18.45
Unexploded (UXO) Sweep Personnel	18.45
Unexploded Ordnance (UXO) Technician I	18.45
Unexploded Ordnance (UXO) Technician II	22.32
Unexploded Ordnance (UXO) Technician III	26.76
Weather Observer, Combined Upper Air and Surface Programs (3)	18.32
Weather Observer, Senior (3)	20.48
Weather Observer, Upper Air (3)	18.32
Transportation/ Mobile Equipment Operation Occupations	
Bus Driver	16.95
Parking and Lot Attendant	9.33
Shuttle Bus Driver	11.29
Taxi Driver	8.98
Truckdriver, Heavy Truck	17.54
Truckdriver, Light Truck	10.26
Truckdriver, Medium Truck	17.28
Truckdriver, Tractor-Trailer	17.54

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ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:  
HEALTH & WELFARE: \$2.15 an hour or \$86.00 a week or \$372.67 a month  
VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3

weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span

of continuous service with the present contractor or successor, wherever employed, and with

the predecessor contractors in the performance of similar work at the same Federal

facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King

Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus

Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for

any of the named holidays another day off with pay in accordance with a plan communicated

to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as

numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is

entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the

rate of basic pay plus a night pay differential amounting to 10 percent of the rate of

basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular

tour of duty, you will earn a night differential and receive an additional 10% of basic pay

for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a

week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of

basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work

which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is

considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed

in a position that represents a high degree of hazard when working with or in close

proximity to ordinance, explosives, and incendiary materials. This includes work such as

screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and

pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-

house activities involving propellants or explosives. Demilitarization, modification,

renovation, demolition, and maintenance operations on sensitive ordnance, explosives and

incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents

a low degree of hazard when working with, or in close proximity to ordnance, (or employees

possibly adjacent to) explosives and incendiary materials which involves potential injury

such as laceration of hands, face, or arms of the employee engaged in the operation,

irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent

work area or equipment being used. All operations involving, unloading, storage, and

hauling of ordnance, explosive, and incendiary ordnance material other than small arms

ammunition. These differentials are only applicable to work that has been specifically

designated by the agency for ordnance, explosives, and incendiary material differential pay.

**\*\* UNIFORM ALLOWANCE \*\***

If employees are required to wear uniforms in the performance of this contract (either by

the terms of the Government contract, by the employer, by the state or local law, etc.),

the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such

uniforms is an expense that may not be borne by an employee where such cost reduces the

hourly rate below that required by the wage determination. The Department of Labor will

accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate

number of uniforms without cost or to reimburse employees for the actual cost of the

uniforms. In addition, where uniform cleaning and maintenance is made the responsibility

of the employee, all contractors and subcontractors subject to this wage determination

shall (in the absence of a bona fide collective bargaining agreement providing for a

different amount, or the furnishing of contrary affirmative proof as to the actual cost),

reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or

\$.67 cents per day). However, in those instances where the uniforms furnished are made of

"wash and wear" materials, may be routinely washed and dried with other personal garments,

and do not require any special treatment such as dry cleaning, daily washing, or commercial

laundering in order to meet the cleanliness or appearance standards set by the terms of the

Government contract, by the contractor, by law, or by the nature of the work, there is no

requirement that employees be reimbursed for uniform maintenance costs.

\*\* NOTES APPLYING TO THIS WAGE DETERMINATION \*\*

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service

Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the

Third Supplement, dated March 1997, unless otherwise indicated. This publication may be

obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the

Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444

(SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not

listed herein and which is to be employed under the contract (i.e., the work to be

performed is not performed by any classification listed in the wage determination), be

classified by the contractor so as to provide a reasonable relationship (i.e., appropriate

level of skill comparison) between such unlisted classifications and the classifications

listed in the wage determination. Such conformed classes of employees shall be paid the

monetary wages and furnished the fringe benefits as are determined. Such conforming

process shall be initiated by the contractor prior to the performance of contract work by

such unlisted class(es) of employees. The conformed classification, wage rate, and/or

fringe benefits shall be retroactive to the commencement date of the contract. {See Section

4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF

1444 should be prepared for each wage determination to which a class(es) is to be

conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).

2) After contract award, the contractor prepares a written report listing in order proposed

classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate),

including information regarding the agreement or disagreement of the authorized representative of the

employees involved, or where there is no authorized representative, the employees

employees



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Intake Works Hydraulic Cylinder Rehab, Mud Mountain Dam, White River, WA

TECHNICAL EXHIBITS

TE-1 Performance Requirements Summary

TE-1A Performance Requirements Summary Chart

## SECTION 01100

## DEFINITIONS AND TERMS

## 1.1 GENERAL

Wherever used in the technical specifications, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

## 1.2 ABBREVIATIONS

Wherever the following abbreviations are used, they are to be construed the same as the respective expressions represented:

AQL	Acceptable Quality Level
°C	Degrees Celsius
CDR	Contract Discrepancy Report
CFR	Code of Federal Regulations
CLIN	Contract Line Item Number
CM	Contract Manager
CO	Contracting Officer
COR	Contracting Officer's Representative
DOD	Department of Defense
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FAR	Federal Acquisition Regulation
ID	Inside diameter
MTCA	Washington State Model Toxics Control Act
NFPA	National Fire Protection Association
NPT	National Standard Taper Pipe Thread
OD	Outside Diameter
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
psia	Pounds per square inch (atmosphere)
psig	Pounds per square inch (gauge)
psig/ft	Pounds per square inch (gauge) per foot
QAE	Quality Assurance Evaluator
QAEP	Quality Assurance Evaluation Program
QASP	Quality Assurance Surveillance Plan
QAE	Quality Assurance Evaluator
QC	Quality Control
QCP	Quality Control Plan
USACE	United States Army Corps of Engineers

### 1.3 DEFINITIONS

1.3.1 Acceptable Quality Level (AQL). The allowable variance from a standard before the Government will reject the specific service. An AQL does not allow the Contractor to knowingly offer defective service, but admits that defective performance may sometimes be unintentional. As long as the defective performance does not exceed the AQL, the Government will not reject the service. However, the COR may direct the Contractor to either perform the service again or otherwise correct the deficiency, at no additional cost to the Government. Also, the Government reserves the right to correct deficient services by other means and, in such cases, reduce payments to the Contractor in accordance with procedures contained in Section E of these specifications.

1.3.2 Defective Service. A service output that does not meet the standard of performance specified in the contract for that service.

1.3.3 Government-Furnished property (GFP). Property owned by the Government and furnished for Contractor use.

1.3.4 Latent Defects. Latent defects are defects that are present in a hidden or undeveloped state and are not visible or apparent at the time of inspection, but which become obvious or come into being at some future time.

1.3.5 Lot. The total number of potential service outputs in a surveillance period.

1.3.6 Maintenance. The work required to preserve and maintain a facility in such condition that it may be effectively used for its designated functional purpose. Maintenance includes work done to prevent damage that would be more costly to restore than to prevent. Maintenance includes work to sustain components, or to investigate and identify the source of problems before they become serious. Examples include but are not limited to, renewing disposable filters, painting, caulking, waterproofing, lubricating, flushing, calibrating, adjusting, refastening loose siding and sealing bituminous pavements.

1.3.7 Major Defect: A major defect is a defect that is likely to reduce materially the usability or the unit of service for its intended purpose. A major defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining or depending upon the service delivery, or a defect that judgment and experience indicate requires corrective action to achieve substantial compliance with contract requirements. A major defect is also classified as a collection of 3 or more minor defects in the same single feature of work, item of equipment or system.

1.3.8 Minor Defect: A minor defect is a defect that is not likely to reduce materially the usability of the unit of service for its intended purpose, or is a departure from established standards having little bearing on the effectiveness of the unit of service. A minor defect is a defect that judgment and experience indicates that is not a substantial deviation from requirements and generally does not require reperformance for overall performance to be considered as satisfactory.

1.3.9 Performance Requirement. The criteria that divides acceptable and unacceptable performance of a task according to the Performance Requirements Summary and the Inspection of Services clause. It is the number of defectives or maximum percent defective in the lot that is deemed acceptable. Any further defectives will require the Government to effect the price computation system. See AQL.

1.3.10 Performance Requirements Summary (PRS). A listing of the service outputs under the contract that are to be evaluated by the QAE on a regular basis, the surveillance methods to be used for these outputs, and the performance requirement of the listed outputs.

1.3.11 Pre-expended bin materials and supplies. The minor materials and supplies, including those that are incidental to the job, for which the total adjusted cost of any one material line item shown on the material estimate is \$10.00 or less. Examples of pre-expended bin materials and supplies include, but are not limited to, electrical connectors, screws, bolts, nuts, washers, spacers, cover plates, and any other item for which the total line item adjusted cost is \$10.00 or less.

1.3.12 Quality Assurance. A planned and systematic pattern of all actions taken by the Government to provide confidence that adequate technical requirements are established, products and services conform to established technical requirements, and satisfactory performance in accordance with the requirements of the Performance Work Statement (PWS) is achieved.

1.3.13 Quality Assurance Evaluator (QAE). A Government employee responsible for the monitoring of Contractor performance.

1.3.14 Quality Assurance Surveillance Plan (OASP). An organized written document used for quality assurance surveillance. The document contains specific methods to perform surveillance of the Contractor. See Technical Exhibit 1.

1.3.15 Quality Control. Those actions taken by the Contractor to control the performance of services to ensure that they conform to the contract requirements.

1.3.16 Refuse. Any discarded material resulting from contract activities, that can legally be disposed of in a municipal landfill.

1.3.17 Repair. Repair is the restoration of a piece of equipment, a system, or a facility to such condition that it may be effectively utilized for its intended purposes. Repair may be overhaul, reprocessing, or replacement of constituent parts or materials that have deteriorated by action of the elements or usage and have not been corrected through maintenance, or replacement of the entire unit or system if beyond economical repair.

1.3.18 Sample. A sample consists of one or more service outputs drawn from a lot for quality assurance surveillance. The number of outputs in the sample is the sample size.

1.3.19 Spill. Any discharge or release of hazardous material, including untreated product, from the ordinary containers employed in the normal course of storage, transfer, processing or uses.

1.3.20 Wastes. Any material, such as used oil, product or hazardous waste, that is restricted from being disposed of in a municipal landfill.

END OF SECTION

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Intake Works Hydraulic Cylinder Rehab, White River, Mud Mountain Dam, WA

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## SECTION 01140

## SUPPLEMENTARY REQUIREMENTS

## PART 1 GENERAL

## 1.1 PRODUCTION SURVEILLANCE

## 1.1.1 Combined Production Schedule And Progress Chart

Provide to the Contracting Officer within 10 days of contract award a practical schedule showing the order in which the Contractor proposes to perform the work, the dates on which it will start the several salient features of work and show the proposed schedule of activities including preliminary site work and preparation, required phasing of work, procurement and delivery of materials, disassembly and inspection of equipment, repair and factory reassembly, installation of equipment, and factory and field testing. The work schedule shall be reviewed and approved by the Contracting Officer prior to work in the areas proposed by the schedule.

## 1.1.1.1 Sequencing of Work

Refer to Section 01145 for sequencing of work and scheduling constraints.

## 1.1.1.2 Format

The schedule shall be in the form of a bar graph of suitable scale to indicate approximately the percentage of work scheduled throughout the performance period. The bar chart shall incorporate the following features:

- a. Show schedule for each of the salient features of work as well as for the total contract.
- b. Break out work showing each separate phase or outage period, as applicable, of work, the processes required, and allowable time in each phase or outage period.
- c. Allow and include coordination time, inspection time, and transfer and down time between each phase.
- d. A detailed work diagram(s) shall show the required sequence and interdependence of activities and shall present a coordinated plan for complete performance of the work. The Contractor shall assure that all subcontractor work, its own work, Government interfaces, and all contract milestones are included in the detailed diagram(s).

## 1.1.2 Status Reports

The Contractor shall prepare and submit a monthly production status report and submit such report to the Contracting Officer within three work days after the end of each monthly pay period. The report shall include a bar graph showing the actual progress at the end of each month versus the approved progress schedule. The report shall tell whether the project work as a whole is on, ahead of, or behind schedule. If the project work is behind schedule, the Contractor shall explain what actions he will take to regain the schedule. The report shall include a description of problem areas, delaying factors and their impact, and

an explanation of corrective actions taken or proposed. Any delays caused by the Government shall be identified. Any significant items or events that occurred during the report month shall also be detailed.

### 1.1.3 Status Briefings

#### 1.1.3.1 Monthly Status Briefing

The Contractor or his/her authorized on-site representative shall brief the COR once per month on the status of both on-going and planned work. This briefing may occur concurrently with other scheduled meetings between the Contractor and Government personnel. The time, date and location of planning meetings will be determined by the COR, after consultation with the Contractor. A written record of these meetings shall be prepared by the Contractor and furnished to the Government.

#### 1.1.3.2 Additional Meetings

In addition to the requirements contained in paragraph 1.1.3.1, above, the COR may request additional meetings with the Contractor or his/her designated on-site representative to discuss contract performance. The meetings will be at a time and location determined by the COR. A summary report of each meeting will be prepared by the Government and provided to Contractor. The Government reserves the right to require that the principal executive officer of the Contractor attend such meetings in person.

## 1.2 PRE-WORK CONFERENCE

The COR will conduct a pre-work conference with the Contractor to discuss the provisions of this contract and the contractor's submittals. As a minimum, the Contractor shall be represented by the officer of the company that signed the contract, his/her authorized on-site representatives, and his/her personnel who will directly supervise the work associated with the contract. The COR will establish the date, location and time of the pre-work conference, after consultation with the Contractor.

## 1.3 CORRESPONDENCE

1.3.1 All correspondence shall be addressed to the Contracting Officer, shall be serially numbered commencing with Number 1, with no numbers missing or duplicated and shall be forwarded in quintuplicate, as directed by the authorized representative of the Contracting Officer, and shall include an additional copy forwarded to a separate designated location. All copies provided shall be legible and shall also be furnished with the enclosures. The original copy of all correspondence including attachments and enclosures shall be addressed and sent to the Contracting Officer. Each serial letter shall make reference to the contract name, contract number and shall have only one subject.

1.3.2 For submission of Contractor payment requests, See Section 01270, PAYMENT.

## 1.4 CONTRACTOR'S FILES

Contractor shall maintain "Approved (Action Code "A") and "Approved Except as Noted (Action Code "B") shop drawing files in fabrication shops and at project sites for government use.

## 1.5 SAFETY

The Contractor shall strictly comply with the US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 and all subsequent revisions of the manual as it applies to the activities under this contract. This manual is available on the Internet at:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm>.

In addition to EM 385-1-1, the Contractor is subject to the provisions of the Safety and Health Regulations for Construction and Occupational Safety Standards, which are published by the Department of Labor under authority of Public Laws 91-54 and 91-596. The Contractor shall maintain all applicable provisions of these regulations as they relate to the activities under this contract. The Contractor shall also routinely discuss applicable provisions of EM 385-1-1, job hazard analyses, and the OSHA standards with all Contractor employees.

### 1.5.1 Accident Prevention Program

The Contractor shall prepare and submit an original and two (2) copies of the Accident Prevention Program to the COR for approval prior to issuance of Notice-To-Proceed. This program shall contain the following information in the order listed, and Notice-To-Proceed will not be issued until this program is approved.

#### 1.5.1.1 Safety Policy

A written statement of the company policy concerning accident prevention shall be given to all employees and posted at a prominent location in the contractor's on-site office throughout the contract period. The policy shall include but not be limited to the following:

- a. Employee responsibilities for safety of others, including the general public.
- b. Procedures for reporting accidents.
- c. Procedures for reporting or correcting unsafe conditions or practices.
- d. Safe clearance procedures.
- e. Safety procedures for fire fighting and other emergency activities.
- f. Wearing or utilizing safety equipment.
- g. Condition of plant and equipment utilized by the Contractor's employees.
- h. Fire prevention.
- i. Housekeeping.
- j. Personal safety equipment and apparel to be provided by the Contractor, and that to be furnished by employees.
- k. Training of employees, to include training required by EM 385-1-1.
- l. Handling of safety violations.

- m. Procedures for treating and transporting injured persons to medical facilities.
- n. Confined space entry plan.
- o. Lockout/tagout.

1.5.1.2 Project Safety and Health Plan. A fully completed Project Safety and Health Plan prepared in accordance with EM 385-1-1.

1.5.1.3 Position Hazard Analyses.

Position hazard analyses shall be prepared in accordance with EM 385-1-1. Position hazard analyses shall include an evaluation of hazards and potential hazards and commonly recurring deficiencies associated with each position that might be encountered for an operation, and proposed methods and techniques of accomplishing each item in a safe manner.

1.5.2 Safety Meetings

1.5.2.1 Weekly Meetings.

The Contractor shall conduct an organized weekly safety meetings with a duration not less than thirty (30) minutes for all employees involved in the on-site performance of the contract to discuss safety items, particularly those pertaining to current and upcoming work. The Contractor shall provide at least one day advance notice of the time(s), date(s), and location(s) of planned safety meetings to the COR. The Government reserves the right to attend any or all of these meetings.

1.5.2.2 Reports.

A report of all safety meetings shall be made by the Contractor and furnished to the COR by the 15th day following the end of each month. The report shall include the following information on each meeting: date, time and location of meeting, names of persons attending, summary of safety topics discussed and persons who conducted the meeting.

1.5.3 Safety Violations.

If a Contractor employee persists in violating the safety requirements contained in either these specifications or the Contractor's safety plan, the employee shall be permanently discharged.

1.5.4 Personal Clothing and Safety Apparel.

Contractor personnel shall wear clothing suitable for the weather and working conditions. The minimum shall be the Contractor's required uniform and safety shoes. Additional protective apparel shall be worn by personnel as required by Section 5, EM 385-1-1, Corps of Engineers Safety and Health Requirements Manual.

#### 1.5.5 Safe Clearance Procedures.

ER 385-1-31, "Safe Clearance Procedures, Electrical, Mechanical, Pressure, Hazardous Equipment," establishes clearance procedures when working on or near electrical, mechanical, pressure, and other hazardous equipment. The provisions of this document shall be thoroughly explained to all employees involved in such work and strict compliance shall be emphasized.

#### 1.5.6 Accident Reporting.

1.5.6.1 The Contractor shall report all accidents to the COR involving property loss exceeding \$2,000.00, and/or physical injury, within four (4) hours of the incident. In the event of a physical injury resulting in lost time or fatality, the Contractor shall immediately notify the COR or his/her alternate by radio or telephone. For the purpose of this requirement, a lost time accident is defined as one where the injured employee suffers a related absence from the job during normally scheduled duty hours. The Government reserves the right to investigate any accident and/or obtain additional related information from the contractor.

1.5.6.2 The Contractor shall investigate all accidents involving Contractor employees or Contractor actions that result in death, traumatic injury, occupational disease, or damage to property, materials, supplies or equipment incidental to work performed under this specification. The results of investigations shall be orally reported to the COR immediately, and in writing on ENG Form 3394, Accident Investigation Report, within one (1) work day following the accident.

#### 1.5.7 Employee Safety Awareness.

In order to help promote employee safety awareness, the Contractor shall ensure that each employee reviews the Accident Prevention Program Administrative Plan and the Accident Prevention Program Job Hazard Analysis prior to beginning work and thereafter on at least a semi-annual basis. The Contractor shall maintain records of these reviews that include each employee's signature and the date of the employee's review. A copy of this record shall be furnished to the COR on a semi-annual basis.

#### 1.5.8 Safety Inspection.

The Contractor shall institute a safety inspection program to ensure that all safety requirements are being fulfilled by Contractor employees. Records of the results of this inspection program shall be maintained and furnished to the COR upon request. At a minimum, these records shall include the following information: the identification of the activity inspected; the results of the inspection, including deficiencies noted and corrective actions taken; the date of the inspection; and the signature of the person making the inspection.

#### 1.5.9 Mandatory Use of Seat Belts.

All vehicles used by the Contractor in the conduct of the contract shall be equipped with seat belts and anchorages meeting the requirements of 49 CFR 571 (Department of Transportation, Federal Motor Vehicle Safety Standards). All drivers and passengers of these vehicles shall wear these seat belts in the fastened position whenever the vehicle is in operation. Such equipment shall be maintained in proper working order at all times.

### 1.5.10 Training and Licensing.

The Contractor shall provide all required initial and subsequent training and applicable licensing for Contractor employees at no additional cost to the Government. Prior to the issuance of Notice-To-Proceed, the Contractor shall provide evidence to the COR that all of his/her personnel have the appropriate training and licenses to perform their duties associated with these contract requirements. This training and licensing includes, but is not limited to first aid, safety, confined space entry, defensive driving, and crane operator.

### 1.5.11 Government Safety Inspections.

#### 1.5.11.1 Scope

All Contractor activities conducted in accordance with this contract, as well as equipment and facilities maintained or operated in the performance of contract activities, shall be subject to inspection by the Government for compliance with the safety provisions of the contract. Any violations of those provisions shall be promptly corrected by the Contractor. Also, any equipment that is not in compliance with the safety provisions of this contract shall be immediately removed from service until the problem is rectified.

#### 1.5.11.2 Suspension of Activities.

The COR and any other authorized Corps representative(s) may totally or partially suspend any or all Contractor operations due to unsafe conditions. In the event that the unsafe conditions either are caused by, or are allowed to arise or exist by the Contractor, the Contractor shall be responsible for any or all work stoppages. Performance schedules will not be extended under these circumstances and no payments shall be made to the Contractor for time or work performed during a suspension of activities.

1.5.12 In addition to Safety and Health Requirements Manual EM 385-1-1, and all applicable OSHA standards, the Contractor shall comply with the requirements listed below. Paragraph numbers refer to EM 385-1-1 or are added thereto.

(a) Paragraph 01.A.12: Add new paragraph: Safety Personnel. The Contractor shall designate a knowledgeable and experienced person on his staff to manage the Contractor's safety and accident prevention program. This person will provide a point of contact for the Contracting Officer on matters of job safety, and shall be responsible for ensuring the health and safety of on site personnel and may have other duties if approved by the Contracting Officer.

(b) Paragraph 01.D.02, revise as follows:

(1) Replace paragraph 01.D.02c with the following:

"c. Property damage in excess of \$2,000.00

(2) Add new paragraph d as follows:

"An injury resulting in a lost workday, not including the day of injury."

PARTS 2 AND 3 NOT USED

END OF SECTION

## SECTION 01145

### SITE SPECIFIC SUPPLEMENTARY REQUIREMENTS

#### 1. CONDUCT OF WORK

##### 1.1 Coordination and Work Hours

1.1.1 Coordination with using agencies shall be made through the Contracting Officer to assist the Contractor in completing the work with a minimum of interference and inconvenience.

1.1.2 Work hours in the project area will be restricted to 6:30 a.m. to 3:00 p.m. daily, Monday through Friday, excluding holidays. The Contractor shall not access the project area before 6:30 a.m. and shall be off site before or by 3:00 p.m. Requests for alternate work schedules may be considered, but will be approved only by the Contracting Officer. Alternate work schedules will not be approved if a Government quality assurance inspector is not available to be on site full time during all hours outside those previously stated.

##### 1.2 Contractor Vehicle Control

###### 1.2.1 Equipment Conditions

The Contractor shall maintain all vehicles, equipment, and vessels used to perform work under this specification in good operating and mechanical condition and in full compliance with EM 385-1-1, Corps of Engineers Safety and Health Requirements Manual. This applies to both Contractor-furnished and Government-furnished equipment. All Contractor-owned vehicles shall have valid licenses and safety inspection stickers.

###### 1.2.2 Vehicle Identification

The Contractor's name shall be clearly identified on both side doors of all of his/her vehicles utilized in the performance of work required by these specifications. Signs may be painted on the doors or magnetic signs may be attached to the doors. Lettering shall be at least two (2) inches high.

###### 1.2.3 Equipment Operation

1.2.3.1 All vehicles and equipment shall be operated in accordance with all Federal, State and local laws.

1.2.3.2 Hauling material along the Project access road, or through the Project office area is prohibited.

1.2.3.3 Four-wheel drive is required for all dump trucks and other vehicles using the access road to the upstream face.

1.2.4 Contractor's vehicles shall only park in approved areas.

1.2.5 The Mud Mountain Dam recreational area will be closed during weekdays, but open to visitors during regular hours on Saturdays and Sundays, and drivers of Contractor vehicles shall exercise extreme caution during these times.

### 1.3 Contractor Security

The Corps of Engineers will not be responsible for providing security for Contractor-owned/controlled equipment, supplies, or materials. The Contractor shall provide those necessary security measures.

### 1.4 Keys

Keys are required for access to the project area and will be provided by the Contracting Officer. The Contractor shall be responsible for Government-owned keys issued for this contract. Upon completion of the work, or upon request of the Contracting Officer, key or keys shall be returned. Should the Contractor lose a key:

- a. the Contracting Officer shall be notified, in writing, within three (3) working days after the loss is discovered, and
- b. should the key not be found before final acceptance, the final contract payment shall be reduced by \$100.00 for re-keying.

## 2. Personal Identification

### 2.1 Employee Listing

The Contractor shall submit a complete listing of Contractor personnel, including job title and identification credential number, who will be working on the project. This listing shall be updated as needed to ensure that the Government has been notified of any changes of Contractor Personnel in advance of new personnel engaging in work on the project. The Government will allow access to the controlled areas of only the Contractor Personnel authorized in advance and included on the employee listing.

### 2.2 Identification Credentials

Contractor personnel shall either be issued a photo identification card (ID) by the Contractor or agree to provide their individual vehicle driver's license as an appropriate identification credential. In either case, the identification number shall be included on the listing required above. If the Contractor determines to issue ID cards to its employees, the following information shall be included:

Contractor Identification and Card Number Indicating Employees:

- |                     |              |
|---------------------|--------------|
| o Full Name         | o Height     |
| o Current Address   | o Weight     |
| o Birth Date        | o Hair Color |
| o Recent Photograph | o Eye Color  |

### 2.3 Employee Termination

If a Contractor employee resigns or is terminated the Contracting Officer, or designated representative shall be so notified at the earliest opportunity, but in no case later than the start of the succeeding workday.

## 2.4 Access Control

Contractor personnel shall be instructed to present identification credential upon request by proper authority as established by the Contracting Officer.

## 3. WORK AND ACTIVITIES BY OTHERS

The Contractor shall not interfere with any work at the project site by authorized Government personnel or contractors. The Contractor shall immediately report to the COR any actions by individuals or contractors which adversely impact his/her performance. The Government reserves the right to conduct coordination meetings with the Contractor and other entities relating to work and activities at the project site. The Contractor shall make all reasonable efforts to coordinate his/her activities with the activities and work by others.

## 4. UTILITY OUTAGES

Contractor shall coordinate utility outages with the Contracting Officer at least 7 days in advance. Outages shall be kept to a minimum and any one outage shall not last more than 2 hours.

## 5. PROTECTION OF GOVERNMENT PROPERTY

In addition to requirements of the CONTRACT CLAUSES, Contractor shall protect all Government property within the buildings in which he is working, except for such property as is required to be demolished. Property which is to be demolished shall be protected until its scheduled demolition time. Protection shall include, but not be limited to, protection from production generated dust, debris, water, and vibration.

### 5.1 Contractor's Liability

#### 5.1.1 Damage to Government Property and Materials.

The Contractor shall be liable for all damage, destruction or employee theft of Government property and materials through either willful or simple negligence. Such property includes, but is not limited to buildings, structures, roads, trees, shrubs, turf, utilities, recreation facilities, equipment, vehicles, materials and supplies, natural resources, and structural components. The Contractor either shall make payment to the Government for such damage, destruction or theft in the amount determined by the COR or shall replace or repair the damaged, destroyed or stolen property to the satisfaction of the COR.

#### 5.1.2 Damage to Property or Injury to Persons

By execution of this contract, the Contractor agrees to hold and save the United States harmless from all claims for damages to property or injuries to persons which may arise from or be incidental to the performance of work under this contract, or for damages to the property of the Contractor, or for damages to the property or injuries to the person of the Contractor's officers, agents, employees, or subcontractors, and the United States shall not be responsible for such damages or injuries.

## 6. PRODUCTION SCHEDULE REQUIREMENTS

### 6.1 Sequence of Work

The cylinders shall be removed and rehabilitated one at a time: One cylinder shall be removed, rehabilitated, and reinstalled before the removal and rehabilitation of any other cylinder. Cylinders shall be serviced during the period and in the sequence shown in the table below, except as noted:

Allowable Date of Cylinder Service	Gate Sequence*
1 April through 30 September	E1 – (E1 will be fully <b>open</b> while cylinder is being serviced)
	E2 – (E2 will be fully <b>open</b> while cylinder is being serviced)
	E3 – (E3 will be fully <b>open</b> while cylinder is being serviced)
	R1 – (R1 will be fully <b>closed</b> while cylinder is being serviced)
	R2 – (R2 will be fully <b>closed</b> while cylinder is being serviced)
	R3 – (R3 will be fully <b>closed</b> while cylinder is being serviced)

\* Exception - Cylinder R3 may be serviced first, provided the gate is blocked or hung in fully open position during cylinder repair (to allow fish to migrate downstream).

### 6.2 Coordination

The schedule is based on anticipated stream flow during the contract performance period. The Project Manager for Operations, Mr. Bill Thibadeau, phone (206) 764-3717 (ext 221), cell (253) 222-2320, will keep the Contractor advised of stream flow and weather conditions which could affect the work.

### 6.3 Schedule Constraints

a. Only one gate shall be out of operation at any one time with cylinder removed.

b. Hatch shall be removed for both removal and reinstallation of cylinder. Hatch shall be secure in place to insure that water tight integrity of the tower is not breached while cylinder is being repaired (in case of a high water occurrence during the repair). The Contractor shall give the Government 7 days notice of intent to remove a hatch cover and give 3 day confirmation notice prior to removing a hatch cover (to coordinate with dam operation and weather conditions prior to work at Elevation 976). Government POC for notice to remove a hatch cover is Mr. Seshu V. Vaddey, Seattle District, H & H Section, phone (206) 764-6560.

c Tacoma Public Utilities (TPU) is planning on burying their water supply pipe that crosses the White River downstream of the Dam. The work is currently scheduled to be done between July 14 - August 29. During this time, they have requested that discharge from Mud Mountain Dam not exceed 2,000 cfs. The current forecasts show a very low probability that flows will get to 2,000 cfs during this time window. However, if the flows do by chance exceed 2,000 cfs the project will need to store water in the reservoir, affecting access to the primary hatch for removing/replacing the gate cylinders. Given the uncertainty in forecasting flows and scheduling the work, the Contractor must work in close coordination

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Intake Works Hydraulic Cylinder Rehab, Mud Mountain Dam

with Hydrology & Hydraulics. Any scheduling constraints on the part of the Contractor should be forwarded to H&H as soon as possible.

END OF SECTION

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## SECTION 01270

## PAYMENT

## PART 1 GENERAL

## 1.1 GENERAL

The contract price for each item shall constitute full compensation for furnishing all plant, labor, materials, appurtenances, and incidentals and performing all operations necessary to complete the items of work in accordance with these specifications and the applicable drawings. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein. Unless the payment item paragraph makes a specific exception of any item, incidental items will not be measured under any other item even though there is another listing for the work or material.

## 1.2 PAYMENT ITEMS

## 1.2.1 ITEM 0001

Payment will be made at the contract lump sum price for Item No. 0001, Remove, Rehabilitate, Reassemble, and Reinstall Cylinders for Gates E1, E2 and E3, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

## 1.2.2 ITEM 0002

Payment will be made at the contract lump sum price for Item No. 0002, Remove, Rehabilitate, Reassemble, and Reinstall Cylinders for Gates R1 and R2, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

## 1.2.3 ITEM 0003

Payment will be made at the contract lump sum price for Item No. 0003, Remove, Rehabilitate, Reassemble, and Reinstall Cylinder for Gate R3, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

## 1.2.4 ITEM 0004

Payment will be made at the contract lump sum price for Item No. 0004, Flushing, Cleaning, Partial Replacement, and Testing of the Hydraulic Fluid, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

## 1.2.5 ITEM 0005

Payment will be made at the contract lump sum price for Item No. 0005, All Work for Emergency Gate Position Indicators, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

### 1.2.6 ITEM 0006

Payment will be made at the contract lump sum price for Item No. 0006, Test Hydraulic System, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

### 1.2.7 ITEM 0007

Payment will be made at the contract lump sum price for Item No. 0007, All Work for Access Platforms, Gratings and Ladders, payment of which shall constitute full compensation for costs associated with the item of work as shown on the drawings and as specified, complete.

### 1.2.8 ITEM 0008

Payment will be made at the applicable contract prices for Item "Contract Data", for the specified sub items, payment of which shall constitute full compensation for costs associated with the specified item of work, complete.

#### 1.2.8.1 ITEM 0008AA, All Work for As-Built Drawings

Payment will be made at the contract lump sum price for Item, "All Work for As-Built Drawings" payment of which shall constitute full compensation for costs associated with specified item of work, complete. No partial or total payment will be made for this item until the as-built drawings, both marked up blue prints and electronic files are fully approved by the Government and all copies of approved drawings and electronic media received by the Government.

#### 1.2.8.2 ITEM 0008AB, All Work for O&M Manuals

Payment will be made at the contract lump sum price for Item, "All Work for O&M Manuals" payment of which shall constitute full compensation, for costs associated with specified item of work, complete. No partial or total payment will be made for this item until all O&M manuals are fully approved by the Government and all copies of final manuals are received by the Government in their final binders.

#### 1.2.8.3 ITEM 0008AC, All Other Contract Data Not Included under Items 0008AA and 0008AB

No other payment will be made for contract data not otherwise separately priced and costs for such work shall be included in the contract price for the payment Items to which the work pertains.

### 1.3 PROGRESS PAYMENT INVOICE

Refer to Section G CONTRACT ADMINISTRATION DATA.

PARTS 2 and 3 NOT USED

END OF SECTION

## SECTION 01330

## SUBMITTAL OF CONTRACT DATA

## PART 1 GENERAL

## 1.1 CONTRACT DATA REQUIREMENTS LIST

The Contractor shall submit all items listed on the Contract Data Requirements List (CDRL) (DD Form 1423) included as an attachment under Section J ATTACHMENTS. Submittals required in the CONTRACT CLAUSES are in addition to those listed.

## 1.2 DEFINITIONS

## 1.2.1 Submittal

Items including product data and administrative submittals presented for review and approval or for information. Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) apply to all "submittals."

## 1.3 PREPARATION

## 1.3.1 Marking

Permanent marking shall be provided on each submittal to identify it by contract number; transmittal date; Contractor's, Subcontractor's, and supplier's name, address(es) and telephone number(s); submittal name; specification or drawing reference; and similar information to distinguish it from other submittals. Submittal identification shall include space to receive the review action by the Contracting Officer.

## 1.3.2 Data Format

Required data submittals for each specific material, product, unit of work, or system shall be collected into a single submittal and marked for choices, options, and portions applicable to the submittal. Marking of each copy of product data submitted shall be identical. Partial submittals will not be accepted for expedition of construction effort unless previously requested by COR.

## 1.3.3 Drawing Format

- a. Detail drawings shall not be less than 8 1/2 by 11 inches nor more than 28 x 40 inches.
- b. 11 x 17 to 28 x 40 inches Drawing Size.

Include on each drawing a title block in lower right hand corner with a 3- by 4-inch clear area adjacent. Title block shall contain subcontractor's or fabricator's name, Contract number, drawing title, number, date, bid item number, and a revision block. Contractor shall submit the required number of prints of any type. Provide a blank margin of 3/4 inch at bottom, 2 inches at left, and 1/2 inch at top and right.

- c. Less than 11 x 17 inches Drawing Size.

Include on each drawing a title block with a 1-1/2 by 4-inch clear area adjacent. Title block shall contain subcontractor's or fabricator's name, Contract number, drawing title, number, date, bid item number, and a revision block. Contractor shall submit the required number of copies of any type. Provide a blank margin of 3/4 inch at all sides.

d. Dimension all drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Identify materials and products for work shown.

e. Where drawings are submitted for assemblies of more than one piece of equipment or systems of components dependent on each other for compatible characteristics, complete information shall be submitted on all such related components at the same time. Contractor shall insure that information is complete and that sequence of drawing submittal is such that all information is available for reviewing each drawing. Drawings for all items and equipment, of special manufacture or fabrication, shall consist of complete assembly and detail drawings.

f. All revisions after initial submittal shall be shown by number, date, and subject in revision block.

## 1.4 SUBMISSION REQUIREMENTS

### 1.4.1 Transmittal Form

Transmit submittals with transmittal form prescribed by Contracting Officer. The transmittal form shall identify project title, contract number, contractor, date of submittal and data item submitted.

### 1.4.2 Data and Drawing Submittals

When not indicated on the DD Form 1423 or the applicable specification paragraph, a minimum of three complete sets of data and drawings shall be submitted. One set, marked with review notations by the Contracting Officer, will be returned to the Contractor.

## 1.5 GOVERNMENT'S REVIEW

### 1.5.1 Review Notations

Submittals will be returned to the Contractor with the following "action code" notations:

a. Submittals marked Action Code "A" ("approved") authorize the Contractor to proceed with the work covered.

b. Submittals marked Action Code "B" ("approved as noted") authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections. Notes shall be incorporated prior to submission of the final submittal.

c. Submittals marked Action Code "C" ("return for correction") require the Contractor to make the necessary corrections and revisions and to re-submit them for approval in the same routine as before, prior to proceeding with any of the work depicted by the submittal.

d. Submittals marked Action Code "E" ("not approved" or "disapproved") indicate noncompliance with the contract requirements and shall be re-submitted with appropriate changes. No item requiring a submittal shall be accomplished until the submittals are approved or approved as noted.

e. Contractor shall make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause entitled, "Changes" shall be given to the Contracting Officer.

## 1.6 APPROVED SUBMITTALS

The approval of submittals by the Contracting Officer shall not be construed as a complete check, but will indicate only that the general method of work is satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor is responsible for the satisfactory performance of the work in accordance with the contract documents, including all applicable regulations.

### 1.6.1 Changes To Approved Submittals

If changes are necessary to approved submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change shall be accomplished until the changed submittals are approved. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting alternate methods or work procedures will be given consideration unless accompanied by an explanation as to why a substitution is necessary.

## 1.7 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 required for Government approval. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, notice as required under the Contract Clause entitled "Changes" shall be given promptly to the Contracting Officer.

## 1.8 SCHEDULING

Adequate time shall be allowed for Government review and approval. Items requiring Government approval shall allow for a minimum 14 calendar day period for Government review and approval of the initial submittal and a 7 calendar day period for Government review and approval for subsequent submittals, if required. Review periods are exclusive of mailing time.

## 1.9 WITHHOLDING OF PAYMENT

In accordance with Section E INSPECTION AND ACCEPTANCE, payment for materials and equipment incorporated or installed in the facility and not in compliance with the contract documents or if required approvals have not been obtained will not be made.

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Intake Works Hydraulic Cylinder Rehab, White River, Mud Mountain Dam, WA

#### 1.10 PAYMENT

Separate payment, except as identified in the PRICE SCHEDULE, will not be made for submittals of contract data, and all costs associated therein shall be included in the applicable unit prices or lump sum prices contained in the schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

## SECTION 01355

## ENVIRONMENTAL PROTECTION

**PART 1 GENERAL**

## 1.1 REFERENCES

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

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

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

## U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual
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## 1.2 DEFINITIONS

## 1.2.1 Environmental Pollution and Damage

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

## 1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of

visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

### 1.2.3 Contractor Generated Hazardous Waste

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

## 1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

## 1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

## 1.5 PAYMENT

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

## 1.6 SUBMITTALS

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

### SD-01 Preconstruction Submittals

Environmental Protection Plan; G

The environmental protection plan.

## 1.7 ENVIRONMENTAL PROTECTION PLAN

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

### 1.7.1 Compliance

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

### 1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. A list of the required environmental permits for the job and associated Federal, state, and local laws and regulations governing the project
- f. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and Project Office in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
  2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
  3. Training requirements for Contractor's personnel and methods of accomplishing the training.
  4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
  5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
  6. The methods and procedures to be used for expeditious contaminant cleanup.
- g. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse.
- h. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.
- i. A description identifying those measures and steps that shall be taken to address and adhere to the applicable regulations and laws.

## 1.8 NOTIFICATIONS

### 1.8.1 Government Notification

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

### 1.8.2 Contractor Notification

The Contractor's CQC Manager shall report to the COR or his designee any violations or suspected violations of laws, regulations and ordinances, and the corrective actions taken to that point.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

The Contractor shall be responsible for obtaining and complying with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.

### 3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Land resources surrounding the work area shall be preserved in the condition that exists at the time of contract award.

#### 3.2.1 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.

### 3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation.

### 3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

#### 3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain work areas within the project buildings free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Dust control methods to control particulates in the work area must be approved by the Project Office. 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.

### 3.4.2 Odors

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

### 3.4.3 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 State of Washington rules.

## 3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

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

### 3.5.1 Solid Wastes

For the purpose of the contract, solid waste is defined as all solid materials, trash, or other debris, which is either generated or accumulated by the Contractor in the performance of this contract. Solid wastes shall be placed in containers which are emptied on a regular schedule. Handling, storage, 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. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

#### 3.5.1.1 Fire Hazard

Cloths, cotton waste, and other combustible materials that might constitute a fire hazard shall be placed in closed metal containers and placed outside or destroyed at the end of each day.

### 3.5.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the 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 classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

### 3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262 and shall manage and store hazardous waste in accordance with the Project Office hazardous waste management plan. The

disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

#### 3.5.4 Fuel and Lubricants

Lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. There shall be no storage of fuel on the project site.

#### 3.5.5 Waste Water

Disposal of waste water shall be as specified below.

- a. The Contractor shall dispose of all excess or residual water and mixtures of water, non-volatile cleaning agents used for cleaning purposes or generated by cleaning processes, and all other liquids including, but not limited to, chemical cleaning agents, petroleum products, as well as their containers in a manner and at locations that is approved both by the COR and by the applicable Federal, State and/or local government agencies having jurisdiction over hauling and disposal operations. The Contractor shall provide written evidence to the COR of Federal, State and local approval of these activities. If the Contractor utilizes any disposal facility which is owned or leased by a non-public entity, the Contractor shall provide written evidence to the COR of appropriate State and Federal approval of the facility prior to beginning work under this contract. If the Contractor utilizes any publicly-owned and State and Federal approved disposal site, written evidence of the owner's approval to use such site must be presented to the COR prior to beginning work under this contract. All liquid waste material collected by the Contractor under the terms of this contract becomes the property of the Contractor at the time it is removed from its point of origin. The point of origin is defined as the definitive point where the Contractor picks up the liquid waste material and not the general location of the project. The Contractor shall assume all costs associated with liquid waste disposal. Additionally, the Contractor shall not store or accumulate any liquid waste within the Corps of Engineers property boundaries for a duration longer than one month or a quantity greater than 50 gallons, whichever occurs first. Waste water from construction activities, such as onsite material processing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.

#### 3.5.6 Restrictions

The Contractor will not be permitted to deposit refuse in existing garbage cans or refuse dumpsters. Cleaners shall not be poured, drained, or washed into plumbing fixtures or sanitary or storm sewers. Debris, dirt, dust, and stains attributable to or resulting from the work effort shall be removed, cleaned, or effaced by the Contractor to the satisfaction of the Contracting Officer prior to acceptance of the job. Any residue from constructing, installing or testing mechanical, electrical or fire protection systems shall be cleaned with proper equipment. Residues shall be prevented from becoming aerosols, and shall likewise be prevented from entering the sanitary sewer system, groundwater and/or surface water.

### 3.6 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.

### 3.7 RESTORATION OF FACILITIES

Upon completion or termination of this contract, the Contractor shall vacate and restore the buildings, structures, facilities, space and grounds to the condition in which received and remove any portable buildings provided by the Contractor. This restoration shall be provided at no additional cost to the Government. The Contractor shall repair all damage to Government property caused by negligence or abuse by his/her activities, employees or subcontractors.

END OF SECTION

SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 GENERAL

A Contractor's Quality Control (CQC) system for services related activities shall be established and maintained to ensure compliance with these specifications. The CQC system shall include but not be limited to plans, procedures, and organization necessary to ensure the services which are provided complies with the contract requirements.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

Data

Interim Quality Control Plan; (G)

Submit the interim plan, no later than 20 calendar days after award of contract. The interim plan must be acceptable to the Government prior to start of on-site activities.

Quality Control Plan; (G)

Submit no later than 30 calendar days after award.

CQC records form; (G)

Submit with CQC plan.

Records

Monthly QC Meetings

Minutes and list of attendees of each meeting.

Daily CQC Records

Current records of CQC operations, activities, and tests.

### 1.3 QUALITY CONTROL PLAN

#### 1.3.1 General

The CQC plan shall identify personnel, procedures, instructions, tests, records, and forms to be used. On-site work will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started. The Contract Manager 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.

#### 1.3.2 The Contractor's Quality Control (CQC) Plan

The CQC plan shall include as a minimum the following to cover all work included under this contract, both on-site or off-site; including work by subcontractors, fabricators, suppliers and purchasing agents:

(1) The names and minimum acceptable qualifications of firms or individuals tasked to perform inspections and the extent of their authority. Their functional role shall be depicted in an organization chart. No lead person or first line supervisor shall be considered a Quality Control inspector.

(2) A quality control inspection program covering all general and specific tasks included in the contract scope of work. It shall specify tasks or areas to be inspected on either a scheduled or unscheduled basis and the manner in which inspections are to be conducted.

(3) Method of identifying and tracking deficiencies in the quality of services to be performed, before the level of performance becomes unacceptable as defined in the technical specifications.

(4) Method of documenting and enforcing quality control operations of both prime and any subcontractor work, including inspection and testing.

(5) Special safety equipment clothing required.

(6) Detailed specifics as to how the Contractor will ensure that all personnel take required safety precautions when working with chemicals, electricity, vehicles, power tools, welding equipment, etc., and when entering or working in confined spaces.

(7) 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 qualified testing laboratories to be used and person responsible for each test.

(8) Reporting procedures, including proposed reporting formats. (see sample forms at end of Section.)

### 1.3.3 Acceptance of Plan

Acceptance of the CQC plan is required prior to the start of work. Acceptance is conditional and will be predicated on satisfactory performance during the contract. The Government reserves the right to require the Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to obtain the conformance with contract requirements.

### 1.3.4 Notification of Changes

After acceptance of the CQC plan, any proposed changes shall be submitted prior to implementing of any proposed change.

## 1.4 COORDINATION MEETING

A pre-performance conference and CQC system meeting shall be convened and held within 14 calendar days of the contract award date. The meeting will be held at the Mud Mountain Dam Site at a time mutually agreed to by both parties and arranged by the Government. The Government and the Contractor shall meet to discuss administrative and technical details, and to discuss and develop a mutual understanding of the CQC system in detail, and the interrelationship of Contractor's management and control with the Government's quality assurance. Minutes of the meeting shall be prepared by the Contractor and shall be signed by both the Contractor and the Government, shall become a part of the contract file. There may also 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.

## 1.5 QUALITY CONTROL ORGANIZATION

The following shall apply to the work being performed whether in the Contractor's or a subcontractor's offices including, when applicable, design/engineering offices and fabrication/manufacturing facility or at the project. The word "site" shall apply to all three locations, as applicable.

### 1.5.1 CQC System Manager(s)

The Contractor shall identify as CQC System Manager an individual within the 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, or a graduate of construction management, with a minimum of 5 years related experience on equipment similar to this contract. This CQC System Manager shall be at the site at all times during the work activities and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. 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 will be the same as for the designated CQC manager.

### 1.5.2 Organizational Changes

The Government's acceptance shall be obtained before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

### 1.5.3 Submittals

The CQC organization shall be responsible for certifying that all contract submittals are in compliance with the contract requirements.

## 1.6 CONTROL

CQC is the means by which the Contractor ensures that the work, to include that of subcontractors and suppliers, complies with the requirements of the contract. The controls shall be adequate to cover all operations, and shall be keyed to the proposed work sequence.

### 1.6.1 General Requirements

- (1) A review of all contract documents and performance requirements.
- (2) Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis.
- (3) Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.
- (4) Visually inspecting items not requiring laboratory testing.
- (5) Preparing and maintaining inspection checklists.
- (6) Coordinating site activity.
- (7) Maintaining copies of test results, inspection reports certification papers and permits.
- (8) A check to assure that required control inspection and testing are provided.
- (9) A physical examination of required materials and equipment, to assure that they are on hand, and are stored as specified.
- (10) Resolution of all differences.

### 1.6.2 Employee Standards

- (1) Review the activity hazard analysis with each worker.
- (2) The applicable workers shall be informed as to the acceptable level of workmanship required in order to meet contract specifications prior to the start of actual work.
- (3) Ensure for new employees, all applicable requirements are discussed prior to performance of work.

1.6.3 Follow-up. Daily checks shall be performed on the ongoing work to assure continuing compliance with contract requirements, including control testing. The checks shall be made a matter of record in the CQC documentation. (See paragraph "Documentation.") Final follow-up checks shall be conducted and all minor deficiencies corrected or scheduled for correction within appropriate need dates, major deficiencies including items not covered by routine maintenance shall be identified and an evaluation and proposal of repair activities submitted to GQAR to prevent continuation of detrimental operations.

## 1.7 TESTS

### 1.7.1 Testing Procedure

Tests that are specified or required shall be performed to verify that control measures are adequate to provide a product which conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. A list of tests to be performed shall be furnished as a part of the CQC plan. The list shall give the test name, specification paragraph containing the test requirements, and the personnel responsible for each type of test. The following activities shall be performed and recorded and the following data provided:

- (1) Verify that testing procedures comply with contract requirements.
- (2) Verify that facilities and testing equipment are available and comply with testing standards.
- (3) Check test instrument calibration data against certified standards.
- (4) Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- (5) Results of all tests taken, both passing and failing tests, will be recorded on an approved report for the date taken. 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.

## 1.8 QC MEETINGS

After the start of contract performance, the QC Manager shall conduct monthly QC meetings at the work site with the project personnel. The QC Manager shall prepare the minutes of the meeting and provide a copy to the Contracting Officer within 2 working days after the meeting. The Contracting Officer may attend these meetings. The QC Manager shall notify the Contracting Officer at least 48 hours in advance of each meeting. As a minimum, the following shall be accomplished at each meeting:

- a. Review the minutes of the previous meeting;
- b. Review the schedule and the status of work:
  - (1) Work accomplished since last meeting
  - (2) Rework items identified since last meeting
  - (3) Rework items completed since last meeting;

- c. Review the status of submittals:
  - (1) Submittals reviewed and approved since last meeting
  - (2) Submittals required in the near future;
- d. Review the work to be accomplished in the next 4 weeks and documentation required:
  - (1) Establish completion dates for work features
  - (2) Update the schedule, including testing and any other inspection required by this contract.
  - (3) Discuss work methods and the approach that will be used to provide quality work performance by planning ahead and identifying potential problems for each definable feature of work.

## 1.9 QC CERTIFICATION

### 1.9.1 Contractor Quality Control Report Certification

Each Contractor Quality Control Report shall be prepared, signed and dated by the QC Manager.

## 1.10 DOCUMENTATION

Current records of CQC operations, activities, and tests performed shall be maintained including the work of subcontractors and suppliers. These records shall be on an approved form and shall include factual evidence that required quality control activities and/or tests have been performed.

### 1.10.1 Daily Records

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 24 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 form shall be submitted to the COR for review and approval as part of the Contractor's Quality Control Plan. (See sample form attached.) The reporting of work shall be identified by terminology consistent with the work schedule. Contractor Quality Control Reports shall contain the following information:

- a. Identify inspections conducted. Check that materials are stored properly, preliminary work was done correctly, the testing plan has been reviewed, and work methods and schedule have been discussed, and that safety and hazard analysis was addressed. Identify any safety hazards encountered, instructions given and corrective actions taken.

- b. List the rework items identified, but not corrected.
- c. List the rework items corrected from the rework items list along with the corrective action taken.
- d. Identify submittals which have been checked for compliance with the technical specifications and submitted as required.
- e. Include a "remarks" section in this report which will contain pertinent information including directions received, quality control problem areas, deviations from the QC plan, deficiencies or delays encountered, QC meetings held, corrective direction given by the QC Organization and corrective action taken by the Contractor. Also note conflicts or errors in the specifications or reference data or manuals.
- f. The report shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

#### 1.10.2 Rework Items List

The QC Manager shall maintain a list of work that does not comply with the Contract requirements, identifying what items need to be reworked, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected. There is no requirement to report a rework item that is corrected the same day it is discovered. Attach a copy of the "Rework Items List" to the Contractor Weekly Quality Control Report. The Contractor shall be responsible for including on this list items needing rework including those identified by the Contracting Officer.

#### 1.11 NOTIFICATION OF NONCOMPLIANCE

The Government will notify the Contractor of any detected noncompliance with the foregoing requirements. After receipt of such notice, immediate corrective action shall be taken. Such notice, when delivered to the Contractor at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Government may take appropriate action in accordance with the requirements of Section E, INSPECTION AND ACCEPTANCE.

#### 1.12 PAYMENT

Separate payment will not be made for work required under this section, all costs associated therewith shall be included in the applicable unit prices or lump sum prices contained in the Price Schedule.

PART 2 - NOT USED

PART 3 - NOT USED

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Intake Works Hydraulic Cylinder Rehab, White River, Mud Mountain Dam, WA

Attachments follow  
(sample forms)

END OF SECTION



3. QUALITY CONTROL INSPECTIONS AND RESULTS: (Include a description of preparatory, initial, and/or follow up inspections or meetings; check of subcontractors work and materials delivered to the site compared to submittals and/or specifications; comments on the proper storage of materials; include comments on corrective actions to be taken):

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4. QUALITY CONTROL TESTING AND RESULTS (comment on tests and attach test reports):

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5. DAILY SAFETY INSPECTIONS (Include comments on new hazards to be added to the Hazard Analysis and corrective action of any safety issues):

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6. REMARKS (Include conversations with or instructions from the Government representatives; delays of any kind that are impacting the job; conflicts in the contract documents; comments on change orders; environmental considerations; etc.):

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CONTRACTOR'S VERIFICATION: The above report is complete and correct. All material, equipment used, and work performed during this reporting period are in compliance with the contract documents except as noted above.

\_\_\_\_\_  
CONTRACTOR QC REPRESENTATIVE

## SECTION 01501

### TEMPORARY FACILITIES AND CONTROLS

#### PART 1 GENERAL

##### 1.1 AVAILABILITY OF UTILITY SERVICES

###### 1.1.1 Electricity

Electrical power at 480 volts, 3 phase, and 120 volts, single phase, will be available at the intake tower. The amount of power obtained from any one source is limited according to the capability of the existing outlet circuits used. The Contractor shall, at his own expense and in a satisfactory manner, furnish, install and maintain all necessary temporary connections, disconnects and distribution systems to obtain power. The Contractor shall remove the same prior to final acceptance of construction. No charge will be made for the electrical power used, but care shall be exercised to prevent wasteful usage of power.

###### 1.1.2 Water

The Government will make all reasonable amounts of water for domestic use available to the Contractor from existing outlets and supplies on the project site, however no domestic water source is available at the intake structure. The Contractor shall, at his own expense and in a satisfactory manner, furnish, install, maintain and remove all necessary connections. No charge will be made for the water used, but care shall be taken to prevent wasteful use of the water.

###### 1.1.3 Telephone

The Government will not provide either local or long distance telephone service. The Contractor shall provide local and long distance telephone service at his/her expense for Contractor execution of this contract.

##### 1.2 SANITARY PROVISIONS

No sanitary facilities are available for Contractor use on the project site. Contractor shall provide sanitary accommodations for the use of employees as may be necessary and shall maintain accommodations approved by the Contracting Officer and shall comply with the requirements and regulations of the State Health Department, County Sanitarian, or other authorities having jurisdiction.

##### 1.3 TEMPORARY ELECTRIC WIRING

###### 1.3.1 Temporary Power and Lighting

The Contractor shall provide construction power facilities in accordance with the safety requirements of the National Electric Code NFPA No. 70 and the SAFETY AND HEALTH REQUIREMENTS MANUAL EM 385-1-1. The Contractor, or its delegated subcontractor, shall enforce the safety requirements of electrical extensions for the work of subcontractors. Work shall be accomplished by skilled electrical tradesmen.

### 1.3.2 Equipment

In addition to the requirements of SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1, temporary wiring conductors installed for operation of tools and equipment shall be either Type TW or THW contained in metal raceways, or shall be hard usage or extra hard usage multiconductor cord. Temporary wiring shall be secured above the ground or floor in a workmanlike manner and shall not present an obstacle to persons or equipment. Open wiring may only be used outside of buildings, and then only in accordance with the provisions of the National Electric Code.

### 1.3.3 Submittals

Submit detailed drawings of temporary power connections. Drawings shall include, but not be limited to, main disconnect, grounding, service drops, service entrance conductors, feeders, GFCI'S, and all site trailer connections.

## 1.4 FIRE PROTECTION

During the contract period, the Contractor shall provide fire extinguishers in accordance with the safety requirements of the SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1. The Contractor shall remove the fire extinguishers at the completion of work.

## 1.5 STAGING AREA

Contractor will be provided adequate open staging area as directed by the Contracting Officer. Area unsecured. Contractor shall provide all power, water, toilet facilities and communication to the site. Contractor shall make provisions for its own security.

## 1.6 ACCESS ROAD

Access to the intake structure site is along a well graveled but steep single lane road that comes from the dam site maintenance yard. Four wheel drive vehicles will be required. Any crane or truck needed to traverse this road will require excellent brakes, and traction. The use of a "tag" vehicle such as a 4 wheel drive or crawler tractor to assist may be necessary.

## 1.7 SCAFFOLDING

The Contractor shall furnish and install all necessary scaffolding. Approved antislip surface material shall be installed on scaffolding platforms. Scaffolding shall comply in every respect with EM 385-1-1. Any scaffolding, ladder, stairway, or other access schemes proposed to be used which is not covered in or not in compliance with EM 385-1-1 shall be coordinated with and approved by the Contracting Officer.

## 1.8 USE OF CRANE

### 1.8.1 Government-Owned Project Crane

The Project's 30-ton mobile crane will be available for use on the work within the working load and movement limits of the crane. The crane will be available for use by the Contractor at such times as not required for other maintenance and repair work performed by Government personnel. The Government will furnish fuel, lubrication, and normal maintenance including adjustments without cost to the Contractor. The Contractor shall give the Government at least 3 working days notice prior to use. The

Government retains the right to withdraw the availability of the crane at any time it is required for emergency use, normally scheduled project maintenance, or for coordination with other contractors.

#### 1.8.1.1 Crane Operators

The Contractor shall furnish a qualified crane operator for his operations requiring use of the Project crane. The operator in addition to meeting the requirements of EM 385-1-1 shall have had at least 1 year experience on a mobile crane of equivalent capacity and characteristics. Qualifications for each operator in the form of an affidavit signed by the operator and the Contractor shall be furnished in duplicate. The affidavit shall include a complete record of all related work with particular emphasis on experience directly related to operation of a mobile crane handling comparable loads. Before any operator is approved he shall spend at least 1 hour in being checked out on the cranes under the direct surveillance of a Government operator. The operators may be retested at any time. The Contractor shall insure that the crane operator is current (within the previous 12 months) physical or medical examinations with emphasis on hearing, eyesight, and cardiovascular conditions. Dates of physical exams shall be submitted to the Contracting Officer.

#### 1.8.1.2 Riggers

Only qualified riggers shall be used in preparing loads for lifting and in attaching such loads to the cranes. A Government operator will check them for knowledge of hand signals. Hand held portable radios may be used but only on non-Government frequencies. Except for use of the mobile crane, the rigging, slings, fittings and all other lifting devices and attachments must be supplied by the Contractor.

#### 1.8.1.3 Responsibility for Crane Operation

The Contractor shall be liable for all damage, due to fault or negligence, incurred while the project crane is operated by the Contractor's crane operator. Crane hoist load limits are not to be exceeded.

### 1.9 CONTRACTOR'S EQUIPMENT AND MATERIAL

The planned method of transportation and operation of Contractor heavy equipment to be used in the performance of this contract shall be coordinated with the Contracting Officer. This shall include the type, size, and loading of equipment and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures shall be avoided when possible.

### 1.10 HOUSEKEEPING AND CLEANUP

Pursuant to the requirements of Clause CLEANING UP and Clause ACCIDENT PREVENTION, of the CONTRACT CLAUSES, the Contractor shall assign sufficient personnel to ensure compliance for all work performed on the project site. The Contractor shall submit a detailed written plan for implementation of this requirement. The plan will be presented as part of the prework safety plan and will provide for keeping the total project work site, structures, and accessways free of debris and obstructions at all times. Work will not be allowed in those areas that, in the opinion of the Contracting Officer, have unsatisfactory cleanup and housekeeping at the end of the preceding day's normal work shift. At least once each day all areas shall be checked by the Quality Control person of the Contractor and the findings recorded on the Quality Control Daily Report. In addition, the Quality Control person shall take immediate action to ensure compliance with this requirement. Housekeeping and cleanup shall be assigned by the Contractor to specific personnel. The name(s) of the personnel shall be available at the project site.

### 1.11 ELEVATED WORK AREAS

Workers in elevated work areas in excess of 6 feet above an adjoining surface require special safety attention. In addition to the provisions of SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1, the following safety measures are required to be submitted to the Contracting Officer's Representative. Prior to commencement of work in elevated work areas, the Contractor shall submit drawings depicting all provisions of his positive fall protection system including, but not limited to, all details of guardrails. Walking on beams and/or girders and the climbing of columns is prohibited without positive protection. Perimeter guardrails shall be installed at floor, roof, or wall openings more than 6 feet above an adjoining surface and on roof perimeters. Rails shall be designed to protect all phases of elevated work. Rails shall be designed by a licensed engineer to provide adequate stability under any anticipated impact loading. As a minimum, the rails shall consist of a top rail at a height of 42 inches, a mid-rail, and a toe board. If safety belts and harnesses are used, the positive fall protection plan will address fall restraint versus fall arrest. Body belts will ONLY be used for fall restraint, they will not be used for fall arrest.

### 1.12 GOVERNMENT WITNESSING AND SCHEDULING OF PERFORMANCE AND/OR ACCEPTANCE TESTING

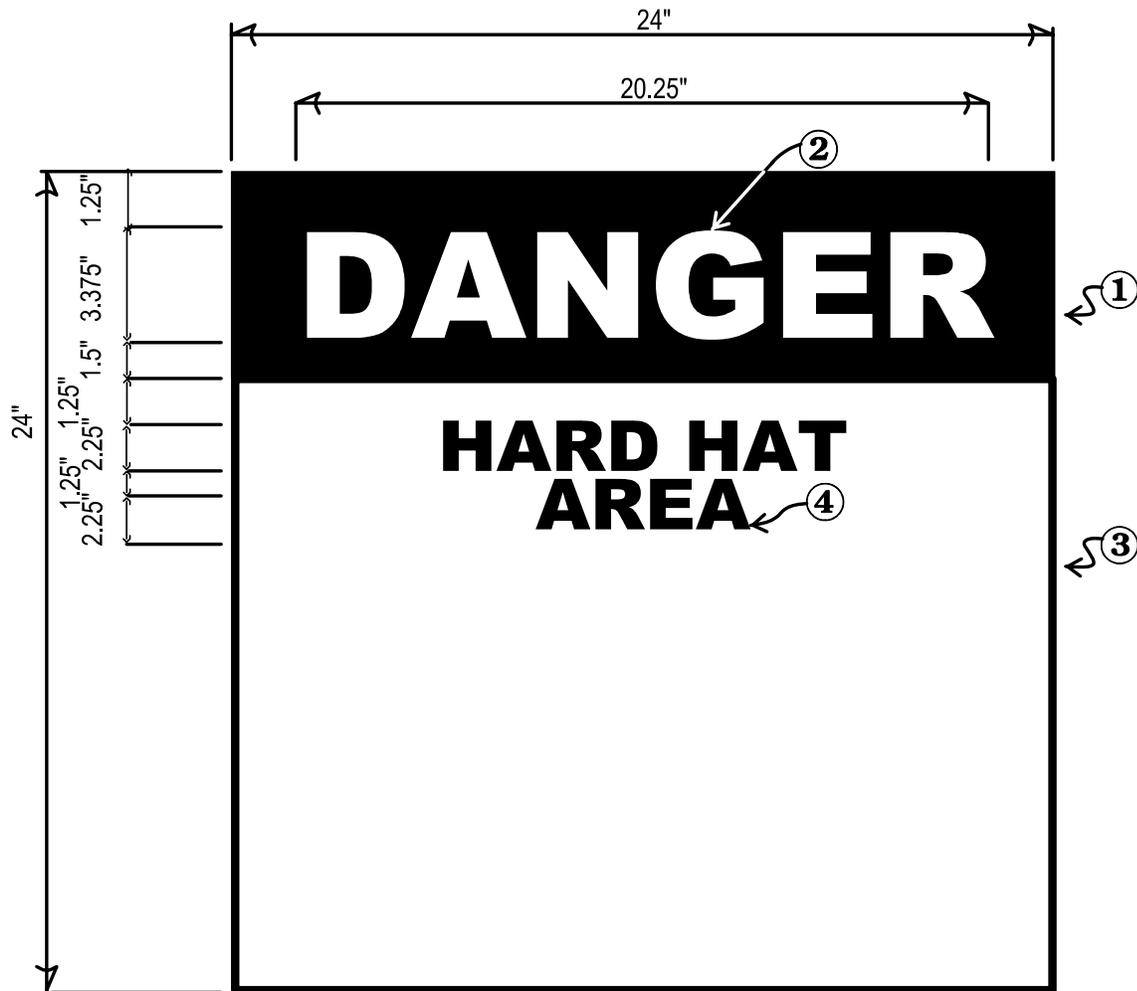
The Contractor shall notify the Contracting Officer, by serial letter, of dates and agenda of all performance testing of the following systems: mechanical and electrical (including fire protection) systems not later than 10 calendar days prior to start of such testing. In this notification, the Contractor shall certify that all equipment, materials, and personnel necessary to conduct such testing will be available on the scheduled date and that the systems have been prechecked by him and are ready for performance and/or acceptance testing. Contractor shall also confirm that all operations and maintenance manuals have been submitted and approved. **NO PERFORMANCE AND/OR ACCEPTANCE TESTING WILL BE PERMITTED UNTIL THE OPERATIONS AND MAINTENANCE MANUALS HAVE BEEN APPROVED.**

Government personnel, at the option of the Government, will travel to the site to witness testing. If the testing must be postponed or canceled for whatever reason not the fault of the government, the Contractor shall provide the Government not less than 3 working days advance notice (notice may be faxed) of this postponement or cancellation.

### 1.13 HARD HAT SIGNS

The Contractor shall provide 24 x 24 inch square Hard Hat Area signs at each entry to the project site or work area as directed by the Contracting Officer. A minimum of two signs will be required. Signs shall be in accordance with the sketch at the end of this section.

## PART 2 PRODUCTS AND PART 3 EXECUTION (NOT APPLICABLE)



- SIGN SHALL BE FABRICATED FROM .125 THICK 6061-T6 ALUMINUM PANEL
- COLOR
- 1. SAFETY RED (SR)
- 2. WHITE
- 3. WHITE
- 4. BLACK
- LETTERING SHALL BE HELVETICA BOLD TYPOGRAPHY.
- LETTERS AND BACKGROUND SHALL BE REFLECTIVE SHEETING MATERIAL.
- SIGNS SHALL BE POSTED AT 6'-6" (BOTTOM SIGN TO GRADE) OR AS DIRECTED BY THE CONTRACTING OFFICER.
- LETTERING TO BE CENTERED ON PANEL.

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SECTION 01703

WARRANTY OF SERVICES

1.1 FAR 52.246-20 - Warranty of Services (May 2001)

(a) Definition. "Acceptance," as used in this clause, means the act of an authorized representative of the Government by which the Government assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services, as partial or complete performance of the contract.

(b) Notwithstanding inspection and acceptance by the Government or any provision concerning the conclusiveness thereof, the Contractor warrants that all services performed under this contract will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of this contract. The Contracting Officer shall give written notice of any defect or nonconformance to the Contractor within 365 days, except when another warranty period is specified within a specification section the other warranty period shall govern, from the date of acceptance by the Government. This notice shall state either-

(1) That the Contractor shall correct or reperform any defective or nonconforming services; or

(2) That the Government does not require correction or reperformance.

(c) If the Contractor is required to correct or reperform, it shall be at no cost to the Government, and any services corrected or reperformed by the Contractor shall be subject to this clause to the same extent as work initially performed. If the Contractor fails or refuses to correct or reperform, the Contracting Officer may, by contract or otherwise, correct or replace with similar services and charge to the Contractor the cost occasioned to the Government thereby, or make an equitable adjustment in the contract price.

(d) If the Government does not require correction or reperformance, the Contracting Officer shall make an equitable adjustment in the contract price.

(End of clause)

END OF SECTION

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## SECTION 01705

## EQUIPMENT-IN-PLACE LIST

## PART 1 GENERAL

## 1.1 SUBMITTALS

Data listed in PART 3 of this section shall be submitted in accordance with section 01330 SUBMITTAL OF CONTRACT DATA. All submittals shall be completed before final payment will be made.

The final equipment-in-place list shall be completed and returned to the Contracting Officer within 30 calendar days of the final inspection. The Contracting Officer will review all final Equipment-In-Place Lists for accuracy and conformance to the requirements contained in DIVISION 1 GENERAL REQUIREMENTS. The lists shall be returned to the Contractor if corrections are necessary. The Contractor shall make all corrections and shall return the lists to the Contracting Officer within 7 calendar days of receipt.

## PART 2 PRODUCTS (NOT APPLICABLE)

## PART 3 EXECUTION

## 3.1 EQUIPMENT-IN-PLACE LIST

Contractor shall submit for approval, at the completion of construction, a list of equipment-in-place. This list shall be updated and kept current throughout construction, and shall be jointly inspected for accuracy and completeness by the Contracting Officer's representative and a responsible representative of the Contractor prior to submission of each monthly pay estimate. A sample form showing minimum data required is provided at the end of this section. The EQUIPMENT-IN-PLACE LIST shall be comprised of all equipment falling under one or more of the following classifications:

- a. Each piece of equipment listed on the mechanical equipment schedules.
- b. Each electrical panel, switchboard, and MCC panel.
- c. Each transformer.
- d. Each piece of equipment or furniture designed to be movable.
- e. Each piece of equipment that contains a manufacturer's serial number on the name plate.
- f. All Government furnished, Contractor installed equipment per a. through e. (price data excluded)

**EQUIPMENT-IN-PLACE LIST**

**CONTRACT NO.:** \_\_\_\_\_

Specification Section: \_\_\_\_\_ Paragraph No. \_\_\_\_\_

**ITEM DESCRIPTION:** \_\_\_\_\_

Item Name: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Model Number: \_\_\_\_\_

Capacity: \_\_\_\_\_ Replacement Cost \_\_\_\_\_

**ITEM LOCATION:**

Building Number: \_\_\_\_\_ Room Number: \_\_\_\_\_

or Column Location: \_\_\_\_\_

**MANUFACTURER INFORMATION:**

Manufacturer Name: \_\_\_\_\_

Trade Name (if  
different from item name): \_\_\_\_\_

Manufacturer's Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

**WARRANTY PERIOD:** \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

END OF SECTION

## SECTION 01780

## RECORD DRAWINGS

## PART 1 GENERAL

## 1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

Working Record Drawings; G

Two sets of the Working Record Drawings shall be submitted to the Contracting Officer for review and approval a minimum of 30 calendar days prior to the date of final inspection. If review of the working record drawings reveals errors and/or omissions, the drawings will be returned to the Contractor for corrections. The Contractor shall make all corrections and return the drawings for backcheck to the Contracting Officer within 10 calendar days of receipt. When submitted drawings are accepted, one set of marked drawings will be returned to the Contractor for the completion of the CADD record drawings.

Preliminary Final CADD Record Drawings; G

The Preliminary Record Drawings submittal shall consist of one set of Electronic Microstation CADD files on CD-ROM showing each drawing, and 2 sets of full size prints. The CD-ROMs shall be marked as "Preliminary As-Built Drawings." One copy of the prints marked with review notations by the Contracting Officer, will be returned to the Contractor.

Final CADD Record Drawings; G

Drawings showing modifications to existing equipment and systems and final installed work under the project. The final CADD record drawings shall consist of two sets of electronic CADD drawing files in the specified format.

## 1.2 PAYMENT

Payment for the preparation and furnishing of records drawings in electronic file format will be made in accordance with the SCHEDULE and Section 01270 PAYMENT. Failure to submit final record drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract for the applicable payment item(s). Approval and acceptance of the final CADD record drawings shall be accomplished before final payment is made to the Contractor.

## 1.3 MAINTENANCE OF RECORD DRAWINGS

## 1.3.1 Working Record Drawings

The Contractor shall revise 2 sets of paper drawings by red-line process to show the actual installed work during the prosecution of the project. These working marked record drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes

from the contract plans which are made in the work or additional information which might be uncovered in the course of work shall be accurately and neatly recorded as they occur by means of details and notes. The working record marked prints will be reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay invoice. If the Contractor fails to maintain the working record drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the record drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working record drawings shall show, but shall not be limited to, the following information:

- a. The location and dimensions of any changes within the equipment, feature or system to be installed/replaced.
- b. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions, etc.
- c. Changes or modifications which result from the final inspection.
- d. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final working prints.
- e. Systems designed or enhanced by the Contractor, such as indicator controls, or alarm systems,

#### 1.4 ELECTRONIC FILE RECORD DRAWINGS

##### 1.4.1 Government Furnished Computer Aided Design and Drafting (CADD) Drawings

No earlier than 30 days after award the Government will have available for the Contractor one set of MicroStation electronic file format contract drawings to be used for preparation of record drawings. The electronic file drawings will be available on either 89 mm (3-1/2 inch) 1.44 MB floppy disks or ISO-9660 CD-ROM, as directed by the Contracting Officer. The Contractor has 30 days after the receipt of the electronic file to verify the usability of the MicroStation files, and bring any discrepancies to the attention of the Contracting Officer. Any discrepancies will be corrected within 15 days and files returned to the Contractor.

##### 1.4.2 Contractor Prepared Record Drawings

The Contractor shall incorporate all deviations from the original contract drawings as recorded in the approved 'Working Record Drawings' (see paragraph 1.3). The Contractor shall also incorporate all the written modifications to the contract drawings which were issued by amendment during the bidding period or by modification after award of the contract. All revisions and changes shall be incorporated, i.e. items marked "deleted" shall be deleted, clouds around new items shall be removed, etc. The Contractor shall prepare the complete set of preliminary final and final record drawings in MicroStation electronic file format. The electronic file format, layering standards and submittal requirements are specified in the paragraph "Electronic File Format Requirements."

##### 1.4.2.1 Modifications to original CADD record drawings shall comply with the following procedures.

- (1) Directions in the modification for posting descriptive changes shall be followed.

- (2) A Modification Circle shall be placed at the location of each deletion.
- (3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.
- (4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).
- (5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.
- (6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.
- (7) The Modification Circle size shall be 3/8 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

#### 1.4.2.2 Quality Standards

The drafting work shall be performed by Certified Engineering Technicians and/or personnel proficient in the preparation of CADD drawings. The record drawings shall be done in a quality equal to that of the originals. Line work, line weights, lettering, and use of symbols shall be the same as the original line work, line weights, and lettering, and symbols. If additional drawings are required they shall be prepared in electronic file format under the same guidance.

#### 1.4.2.3 Marking of Final Drawings

When final revisions have been completed, each drawing shall be identified with the words "AS-BUILT" in block letters at least 3/8-inch high placed above the title block if space permits, or if not, below the title block between the border and the trim line. The date of completion and the words "REVISED AS-BUILT" shall be placed in the revision block above the latest revision notation.

#### 1.4.3 Electronic File Format Requirements

##### 1.4.3.1 General

The MicroStation electronic file(s) deliverable shall be in MicroStation 'DGN' binary format. All support files required to display or plot the file(s) in the same manner as they were developed shall be delivered along with the files. These files include but are not limited to Font Libraries, Pen Tables, and Referenced files.

##### 1.4.3.2 Layering

Layering shall remain as provided in the electronic files. An explanatory list of which layers are in each drawing, including any additional layers needed to complete incorporation of the working data shall be provided with each submittal.

#### 1.4.3.3 Electronic File Deliverable Media

All electronic files shall be submitted in ISO 9660 format CD-ROM (CD). Zip drive disks shall not be provided. Each CD shall have a clearly marked label stating the Contractor's firm name, project name and location, submittal type (AS-BUILT), and date the CD was made. Each submittal shall be accompanied by a hard copy transmittal sheet that contains the above information along with tabulated information about all files submitted, as shown below:

<u>Electronic File Name</u>	<u>Plate Number</u>	<u>Drawing Title</u>
-----------------------------	---------------------	----------------------

Electronic version of the table shall be included with each submittal set of disks.

#### 1.4.4 SUBMITTAL OF RECORD DRAWING DELIVERABLES

##### 1.4.4.1 Preliminary Final CADD Record Drawings

After substantial completion of all work and no later than 7 calendar days prior to the date of the final inspection the Contractor shall submit preliminary final CADD record drawings. The Contractor shall also submit two sets of prints of these drawings for Government review and approval (preliminary final drawings). The Government will promptly return one set of prints annotated with any necessary corrections. All drawings from the original contract drawings set shall be included, including the drawings where no changes were made. The Government will review all record drawings for accuracy and conformance to the drafting standards and other requirements contained in DIVISION 1 GENERAL REQUIREMENTS. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the specified CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval.

##### 1.4.4.2 Final CADD Record Drawings

No later than 30 calendar days after completion of all work and acceptance by the Contracting Officer the Contractor shall submit final CADD record drawings. All drawings from the original contract drawings set shall be included, including the drawings where no changes were made. The Government will review all final record drawings for accuracy and conformance to the drafting standards and other requirements contained in DIVISION 1 GENERAL REQUIREMENTS. The drawings will be returned to the Contractor if corrections are necessary. Within 7 calendar days the Contractor shall revise the CADD files accordingly at no additional cost.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

## SECTION 01782

## OPERATION AND MAINTENANCE DATA

## PART 1 GENERAL

## 1.1 GENERAL INFORMATION

Parts catalogs and operating instructions needed or useful in operation, maintenance, repairs, dismantling, or assembling, and for repair and identification of parts for ordering replacements, shall be especially prepared. The parts catalogs and operating instructions shall cover all equipment furnished under this contract and shall be assembled under a suitable common cover. The assembled material shall include complete identification of the spare parts furnished in compliance with the requirements of these specifications.

## 1.2 SUBMITTAL REQUIREMENTS

## 1.2.1 Preliminary O&amp;M Manual And Data Submittal

## 1.2.1.1 General

To establish and assure uniform O&M manual format, the Contractor shall submit and receive Contracting Officer approval on three (3) complete sets of O&M data without the binders prior to submission of the final bound manuals. Initial O & M Manual data submittal shall be a minimum of 30 days prior to 90 percent project completion.

## 1.2.1.2 Review and Approval

The Contracting Officer will require thirty (30) days for review of submitted O&M manual(s) or data. The Contracting Officer will retain one copy of unacceptable O&M manual submittal and return remainder of copies to the Contractor marked "Returned for Correction." If "Returned for Correction." the Contractor shall resubmit the required number of copies of the manual(s) incorporating all comments, prior to substantial completion and/or use and possession. The Contractor may, at his option, update the copy retained by the Government in lieu of providing the added copy.

## 1.2.2 Final O&amp;M Manual And Data Submittal

Six copies of the complete set of manuals shall be provided.

1.2.2.1 Three of the six completed copies of the final O&M manuals shall contain original manufacturer's data. Data in the remaining manuals may be duplicated copies of original data. All data furnished must be of such quality to reproduce clear, legible copies.

### 1.3 FORMAT

Binders shall be side-binding, telescoping-post, expandable-back, and shall have a supported vinyl cover with a stiff binder board for 8 1/2- by 11-inch sheets. Ring-type loose leaf binders will not be acceptable. The following identification shall be inscribed on the covers with similar information on a title page inside the binder:

- (1) The words "OPERATIONS AND MAINTENANCE MANUAL."
- (2) The name and location of the building, facility, and/or project.
- (3) The volume number and total number of volumes.
- (4) The systems and/or equipment therein.
- (5) The name of the Contractor.
- (6) The contract number.
- (7) The year of completion of the contract.

#### 1.3.1 Master Table Of Contents

Each manual shall contain a master table of contents. The master table of contents shall contain all chapters, appendixes, and a master index and shall be included in the front of the first volume if there is more than one volume. Each subsequent volume shall contain an index for the contents within that respective volume. Each volume shall not be broken between chapters, appendixes, and/or indexes. All chapters, appendixes, and indexes shall be adequately separated and identified by standard line indexes.

#### 1.3.2 Drawings

One 11- by 17-inch copy of each of the drawings shall be furnished and shall be folded and bound for easy unfolding without removal from the binder. Each sheet in the binder shall be numbered and an index provided for ready reference to the data.

### 1.4 CONTENTS

#### 1.4.1 Warning Page

A warning page shall be provided to warn of potential dangers (if they exist), such as high voltage, toxic chemicals, flammable liquids, explosive materials, carcinogens, or high pressures. The warning page shall be placed inside the front cover, in front of the title page.

#### 1.4.2 Operation Data

The operation data shall include specific operating instructions, functional description of operating parts, and special precautions or procedures to be considered. The Contractor shall be responsible for the necessary coordination between his subcontractors, suppliers, and manufacturers to assure complete submittals on individual interrelated equipment components.

a. Electrical Layout Drawings. Straight-line wiring diagram of "as-installed" circuits, with index of location and function of components. Provide one reproducible master set. Mount one set wiring diagrams on panels, racked, or similarly protected.

b. Repairs: Repair procedures shall be presented with a step-by-step procedure for locating and correcting the trouble. A "shop manual" may be used for this purpose. Repair procedures shall be keyed to a troubleshooting guide outlined in three columns with the following headings:

Column 1 - Trouble  
 Column 2 - Probable Cause(s)  
 Column 3 - Correction

The procedures shall clearly indicate a major repair activity which should only be performed in a shop or factory versus normal repair work that may be performed onsite or with equipment online. The procedures shall also clearly indicate the limit of repair work that may be performed by Government personnel during the warranty period without voiding warranty provisions. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the repair procedures and flagged for the attention of personnel.

#### 1.4.3 Maintenance Data

Maintenance data shall include instructions for inspection, testing, and maintenance; parts catalogs; and a list of special tools required.

#### 1.4.4 Preventative Maintenance (PM) Charts

PM charts shall be developed and provided in the manual. These charts shall include the following:

(a) Subject. A clear and descriptive name for the equipment requiring PM shall be given. Reference to shop drawings and catalog cuts shall be provided in a clear manner. "Checkpoints" shall be defined for each piece of equipment.

(b) Procedure. A detailed procedural description of the method in which to perform PM shall be provided for all equipment requiring PM work. Safety precautions shall be provided. Descriptions of "checkpoints" shall be provided.

(c) Dates. The PM charts shall include recommended PM intervals. The intervals shall be defined as requiring PM either daily, weekly, monthly, quarterly, semiannually, or annually. These charts shall be inserted in an appendix at the end of the manual. This appendix shall be for PM charts only. PM shall include inspection, testing, cleaning, replacement, and all routine maintenance work.

#### 1.4.5 Installed Equipment Lists

A copy of the completed Equipment in Place forms required in SECTION 01705: EQUIPMENT-IN-PLACE shall be included in the manual. The completed forms shall be located at the front of the catalog and O&M data for the equipment listed on the form.

#### 1.4.6 Catalog Data Sheets And Spare Parts Listing

All catalog data sheets and the spare parts listing shall be inserted in an appendix at the end of the manual following the preventative maintenance (PM) charts appendix. This appendix shall be for catalog data sheets and the spare parts listing only. An index of the catalog data sheets shall be provided to provide clear and concise reference to shop drawings and individual pages within the manual.

1.4.6.1 Catalog data sheets shall be inserted into the manual such that positive identification of all parts on catalog data sheets are clearly identified by:

(a) Part Name. A clear and descriptive name shall be given to each component in the piece of equipment.

(b) Manufacturer and Part Number. The name, address, and telephone number of the manufacturer shall be given along with the catalog part number.

Standard catalog data sheets will not be acceptable unless irrelevant parts are marked out (with black "x") and relevant parts clearly identified. Any data on catalog sheets which does not directly relate to purchased equipment shall be marked out. Parts shall be so identified that they can be readily ordered from local area industrial supply outlets if not of special manufacture. A cross-reference between items described in catalogs, instructions, and drawings shall be provided to facilitate ease of location of parts described. Highlighting and "scribble notes" will not be acceptable for identification purposes.

1.4.6.2 The spare parts listing shall clearly state the spare parts supplied and a list of recommended spare parts to be stocked. The spare parts listing shall clearly identify:

a. Part Name. A clear and descriptive name shall be given to each component listed as a spare part in the piece of equipment.

b. Manufacturer and Part Number. The name, address, and telephone number of the manufacturer shall be given along with the catalog part number.

c. Quantity. The quantity of each part listed as a spare part shall be given.

d. Reference to Catalog Data Sheets. Each spare part shall be referenced to the corresponding catalog data sheet by page number.

#### 1.4.7 Warranties

In addition to the general warranty required by the contract, the O&M manuals shall include any specific warranties required by other sections of the TECHNICAL SPECIFICATIONS and other warranties normally provided with the particular piece of equipment or system. Extended warranties normally provided by manufacturers that are beyond the warranty of construction shall be specifically noted. The O&M manuals shall also include a specific warranty section itemizing all standard and extended warranty

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Intake Works Hydraulic Cylinder Rehab, White River, Mud Mountain Dam, WA

items. The warranty list shall be as indicated below. Warranties will not begin until the facility is accepted by the Contracting Officer. Copy of warranty shall be included in the manual.

#### WARRANTY INFORMATION

Project Title  
Contract Number

General Contractors Name, Phone Number

<u>ITEM DESCRIPTION</u>	<u>START DATE</u>	<u>END DATE</u>	<u>O &amp; M REFERENCE</u>	<u>LOCATION</u>
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(in alphabetical  
order)

Descriptive Name,  
Manufactures/  
Warrantors Name  
Address & Phone No.

#### 1.5 PAYMENT

No partial or total payment will be made for the O & M manuals until all O&M manuals are fully approved by the Government (A or B action) and all copies of final manuals are received by the Government in their final binders (see the (Price) Schedule and Section 01270 PAYMENT).

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

END OF SECTION

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## SECTION 05054

## WORK AT INTAKE STRUCTURE

## PART 1 GENERAL

This Section covers all work to be done at the Intake Structure to remove all 6 cylinders from the structure, transport to machine shop, return them from the machine shop, clean & paint, reinstall, change or purify hydraulic system oil, change filters, repair pump couplings, and furnish and install new position indication systems. Actual machine disassembly cleaning and cylinder modifications shall be done as specified in Section 05055 titled METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS. Cleaning and painting shall be done as specified in Section 09965 PAINTING: HYDRAULIC STRUCTURES. Position indicator systems shall be furnished and installed as specified in SECTION 15010 POSITION INDICATING SYSTEM FOR HYDRAULIC GATES and herewith in.

## 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 A36/A36M	(1997; Rev. A) Carbon Structural Steel
ASTM D 395	(2001 Rubber Property-Compression Set
ASTM D 412	(1998) Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
ASTM D 471	(1998) Rubber Property-Effect of Liquids
ASTM D 572	(1999) Rubber-Deterioration by Heat and Oxygen
ASTM D 2240	(1991) Rubber Property - Durometer Hardness
ASTM D 4174	(1999) Cleaning, Flushing, and Purification of Petroleum Fluid Hydraulic Systems

## NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(1999) National Electrical Code
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## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

## Reports and Data

### Order of Work; G-RE

Type written descriptive narrative of Contractor's proposed "Order of Work" with proposed dates that each item is to be accomplished. Include alignment narrative as described below.

### Purify Hydraulic Oil; G-RE

Type written procedure to be used to purify or replace existing silt and water contaminated oil. To include catalogue cuts and specifications for any specialized equipment. Include ISO and or ASTM standard data for unit to be used. Include a narrative of expected results of purifying in relation to replacing with new oil..

### Hydraulic Pump Coupling Replacement; G-RE

Submit catalogue data indicating models, materials, and bores. Include scheduled replacement in "Order of Work" as defined above

### Oil Filter Replacement; G-RE

Submit manufacturer's catalogue data with indication of model numbers intended to be used.

### High Water Notification and Evacuation Plan; G-RE

Contractor shall submit for approval a short written narrative with sketches if necessary to show the Government how evacuation from the intake structure would be accomplished in the event of a breached structure or if high water should approach the decks being used. This narrative shall include procedures for notification to the Government of known or observed changing water or structure conditions such as the temporary removal of an access hatch.

### Hatch and Bonnet Cover Seals; G-RE

To include manufacturers certification of intent to furnish seals of the compound specified below and as detailed within the Contract drawings.

### Lifting Devices; G-RE

Custom built lifting devices shall be submitted for approval. Submittal shall include sketches and calculations indicating designed load rating.

## PART 2 PRODUCTS

### 2.1 HATCH AND BONNET COVER SEALS

Rubber J-seals and Bar Seals shall be compounded of natural rubber, synthetic polyisoprene, or a blend of both, and shall contain reinforcing carbon black, zinc oxide, accelerators, antioxidants, vulcanizing agents, and plasticizers. Physical characteristics of the seals shall meet the following requirements:

TEST METHOD		
<u>PHYSICAL TEST</u>	<u>TEST VALUE</u>	<u>SPECIFICATION</u>
Tensile Strength	1.38 MPa (min.)	ASTM D 412
Elongation at Break	450% (min.)	ASTM D 412
300% Modulus	6.21 MPa (min.)	ASTM D 412
Durometer Hardness (Shore Type A)	60 to 70	ASTM D 2240
*Water Absorption	5% by weight (max.)	ASTM D 471
Compression Set	30% (max.)	ASTM D 395
Tensile Strength (after aging 48 hrs)	80% tensile strength (min.)	ASTM D 572

TEST METHOD		
PHYSICAL TEST	TEST VALUE	SPECIFICATION
Tensile Strength	2500 psi (min.)	ASTM D 412
Elongation at Break	450% (min.)	ASTM D 412
300% Modulus	900 psi (min.)	ASTM D 412
Durometer Hardness (Shore Type A)	30 to 40	ASTM D 2240
*Water Absorption	5% by weight (max.)	ASTM D 471
Compression Set	30% (max.)	ASTM D 395
Tensile Strength (after aging 48 hrs)	80% tensile strength (min.)	ASTM D 572

\*The "Water Absorption" test shall be performed with distilled water. The washed specimen shall be blotted dry with filter paper or other absorbent material and suspended by means of small glass rods in the oven at a temperature of 70 degrees C plus or minus 2 degrees C for 22 hours plus or minus 1/4 hour. The specimen shall be removed, allowed to cool to room temperature in air, and weighed. The weight shall be recorded to the nearest 1 mg as W1 (W1 is defined in ASTM D 471). The immersion temperature shall be 70 degrees C plus or minus 1 degree C and the duration of immersion shall be 166 hours.

## 2.2 OIL FILTER REPLACEMENT

Filter replacement effort is typical for a system of this complexity. The following filters shall be furnished and replaced at the appropriate time in the oil purification or replacement process:

2ea Radial Pump	Hycon	0240D010BNHC	phone (610) 266-0100
2ea Emergency Pump	Hycon	0330R010BNHC	
1ea Radial Return	Hycon	0240R010BNHC-S0106	
1ea Emergency Return	Hycon	0330R010BNHC-S0106	
1ea Redundant Return	Hycon	RFBNHC110G10B1. 1/2	
12ea Cylinder Filter	Stauff	SE090F10B	phone (201) 444-7800

## 2.3 HYDRAULIC PUMP COUPLING REPLACEMENT

Original pump coupling inserts were replaced with a (blue-green) colored insert. These inserts shall again be replaced during the hydraulic fluid phase of this project with like couplings. Replacement codes are not known but the original couplings were coded as follows:

Radial Gate Pump: Magnaloy 200 Neoprene 70SH 33-22  
Part # US00802800 (2 each)

Emergency Gate Pump: Magnaloy 400 Neoprene 70SH 33-22  
Part # US00802802 (2 each)

Replacement coupling inserts were a blue-green color which would indicate a Magnaloy color code for Hytrel™ A material having superior physical and mechanical properties with excellent fluid compatibility and high temperature characteristics. Hardness 50D. Excellent performance under heavy duty conditions. Temp range -65°F to +300°F.

Coupling inserts are available from:

Magnaloy Coupling Company  
A Division of Douville Johnston Corporation  
P.O. Box 455 Alpena, MI 49707  
Ph. 989-356-2186

## PART 3 EXECUTION

### 3.1 CONTRACT INTERRUPTION

Historically the time of the year that this Contract is to be executed has low inflows to the lake. High inflows due to uncommonly large rainfalls could happen. If this were to take place the Government might require the Contractor to cease operations, alter the work schedule and completion date, evacuate the structures, or the Contract might be terminated. In either of these cases an equitable adjustment in Contract price would then be negotiated.

### 3.2 CONTRACTOR SETUP AREA

Contractor's primary setup area will be adjacent to the spillway as indicated on the Contract drawings and as otherwise assigned by Government personnel. Some additional setup area will be available on the Elev. 1100.0 deck and the actual gate operating deck at Elevation 953. Although not anticipated during this time of the year; the lower deck areas are subject to flooding during high inflows to the lake. Any equipment temporarily stored on these decks shall be easily mobilized for removal from the area and shall be included in the "Notification and Evacuation Plan" to be submitted above. Areas will also be designated for Contractor employee parking. Minimal if any vehicle parking at the structure access levels is recommended. These points will be discussed at the preconstruction meeting.

### 3.3 DAM WATERTIGHTNESS & INTEGRITY

The Contractor shall at all times ensure that the portions of the dam that he is working with are kept watertight at all times after each operation and upon completion of the Contract. All hatches and any watertight doors shall be immediately closed, reinstalled, and/or sealed immediately as soon as the required use is completed. While at the site he shall also inform project personnel if anything is seen that might affect that integrity.

#### 3.3.1 Gate Bonnets

The openings created by removal of the emergency gate bonnets shall not be left open (intent is to maintain water tightness of tower during work on bonnet plates).

a. The Contractor shall provide and install a blank steel plate over each opening created by removal of emergency gate cylinder bonnets. The plate shall be ASTM A36 steel with a minimum thickness of one inch. The sizes of plates in plan shall be the same dimensions as the bonnets. Holes shall be drilled around the perimeter, diameter and spacing to match existing bonnet. Bonnet may be used as a template. There are two sizes of bonnets. One for the E3 cylinder. The E1 and E2 bonnets should be the same size. All dimensions shall be field verified prior to fabrication.

b. New rubberized seal gaskets shall be provided and installed to seal the blank plates. The gasket material is approx 7 wide, around the total perimeter of the opening. Existing bonnet stud bolts may be reused, but since the blank plates are thinner than the bonnet plates, a spacer may be necessary. An option would be to use new bolts.

### 3.4 ORDER OF WORK

Contractor shall submit a written narrative of "Order of Work" similar to that outlined below. Submittal shall include proposed target dates or time windows for each aspect of the project. All dates and time windows shall be coordinated with operational parameters of Mud Mountain Dam as specified in GATE OUTAGE SCHEDULE above, and as will be discussed at the preconstruction meeting.

Order of work:

1. Flush and purify existing oil for all piping, reservoirs, and manifolds in the main and redundant hydraulic systems. Piping includes but is not limited to control circuit lines, gauge lines, dead end or "side circuit" lines, and main and redundant hydraulic lines. See below for additional details.

2. The Government shall maintain pressure on all connected cylinders until rehab project is complete.

3. Isolate with valving and drain oil from first cylinder and disconnect hydraulic hoses.
4. Unbolt cylinder from bonnet (verify water passage is in an unwatered condition).
5. Install any required lifting devices to cylinder heads.
6. Remove overhead equipment hatches.
7. Remove hydraulic cylinder vertically.
8. Conduct inspection in the presence of the Contracting Officer's Representative. Special emphasis shall be paid to the ceramic coating on the rods. Document any discrepancies in the condition of the cylinder.
9. Install protection on exposed cylinder rod ceramic, rotate cylinder horizontal, place on transport, move to Contractors shop.
10. Notify Government of cylinder disassembly date. Disassemble cylinder.
11. Discuss cylinder modifications with Government and submit report outlining modifications to be made. Perform modifications, cleaning, and oil filling.
12. Notify Government of cylinder testing date. Turn over old seals.
13. Disassemble, inspect, clean, perform machine work and modifications.
14. Clean and paint all removed assemblies.
15. Transport back to Intake Structure, reinstall, test, and put back in service.
16. Emergency gate cylinder rods shall be aligned with bonnet either in the field or at the site. In either case Contractor shall submit typed narrative on proposed method to maintain alignment and at what point the alignment dowels will be placed.
17. Repeat for each successive cylinder.
18. Final inspection and tests.
19. Final touchup paint.

### 3.5 PURIFY HYDRAULIC OIL

Existing oil is "Castrol" AW32 with a viscosity index of 28.8 at 40°C and 137 at 100°C. The oil shall be purified or replaced. Replacement oil shall be identical to that presently in the system. In all cases the oil shall be filtered thru a 5 micron filter prior to entering the system. If purification is used the moisture shall be removed by processing thru an oil purifier/vacuum dehydrator system to remove contaminants. Oil shall be purified in conformance with ASTM D 4174 and/or ISO cleanliness standards. One hundred percent (100%) of the free and emulsified water and 90% of dissolved water, air, and gases shall be removed. Water shall be removed to maximum of 25 ppm. The Contractor shall submit a written

procedure and oil cleanliness recommendations for approval. In conjunction with the purifying or replacement of the oil, all filters at cylinders, main unit, and redundant unit will be changed at the appropriate time as specified above, a manufacturer's certificate or bill shall be submitted to the Contracting Officer for verification of oil delivered. Total oil volume is estimated at 1,595 gallons or twenty nine (29) 55 gallon drums. All oil will be subject to sampling and testing by the government for contaminants and properties. Oil will be sampled downstream of delivery filter system. Cost will be born by the Government.

### 3.6 ELECTRICAL

Contractor shall provide the personnel and equipment required to disconnect and reconnect the electrical power and controls to electrically operated hydraulic devices. All electrical work shall be installed in accordance with the 2002 NEC, State and local Codes. Work shall be performed by a licensed electrician. Contractor shall perform an operational test on all reconnected electrically operated hydraulic devices to verify devices operate as required. Any discrepancies found shall be corrected and a retest of the system shall be performed.

### 3.7 HYDRAULIC CYLINDER OPERATION

The Government will provide instruction to two (2) Contractor employees on hydraulic system operation. These employees "only" will then be allowed to operate the system as necessary. The Government will also inform these employees of aspects of the system that are not to be operated. Mud Mountain Dam Project personnel reserve the right to observe these operators and rescind their authorization to operate the machinery. If rescinded; the Government personnel will temporarily operate the equipment until such time as another Contractor employee can be trained.

### 3.8 LOCKOUT TAGOUT

When working around electrical and operating equipment; proper procedure shall be used to lock out system and electrical circuitry as required. When a cylinder is removed from the system; appropriate valves shall be locked or chainlocked close. The Government will instruct the Contractor on policies regarding this.

### 3.9 MATCH MARKING

All mating parts that might be misinstalled shall be match marked by center punching or numeral stamping prior to start of disassembly.

### 3.10 LIFTING DEVICES

All lifting devices shall be furnished by the Contractor except as specified under Section 01501 TEMPORARY FACILITIES AND CONTROLS paragraph "Government-Owned Project Crane." If a device is a standard manufactured product, it shall have load ratings of sufficient strength for the intended lift. Major lift weights are indicated on drawings. Custom devices shall be designed by the Contractor and shall be submitted for approval and shall be fabricated as specified in SECTION 05055 titled METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

### 3.11 TRANSPORTING CYLINDER

Contractor shall consider the dynamics of the horizontal rod spanning between bottom and piston during rough road travel. It may be desirable to extend the rod half the stroke of the cylinder. The ceramic rod under all conditions shall be protected with wood slats taped around the circumference. This shall be done as soon as possible during the removal and loading process.

### 3.12 DISASSEMBLY FROM MOUNTING

a. Any damage to a cylinder while in the Contractor's care shall be repaired by the Contractor at no additional cost to the Government. Extreme caution shall be taken to not damage the "Ceramic" coated cylinder rods. Damage to the ceramic coating will require shipment of the rod back to the original manufacturer in the Netherlands for repair, or if possible, the contracting of factory personnel to come and repair such damage. All at no additional cost to the Government.

b. After match marking as specified above, the cylinder can then be unbolted from the gate bonnet. All existing bonnet seals shall be replaced with new as detailed on contract drawings. An effort shall be made to save the seals for use as a template for coring holes in the replacement seal. If seal is unsalvageable the bonnet itself can be used as a template.

c. All small parts such as bolts, washers, gaskets etc. shall be containerized and stored in the gate operating room or as otherwise approved.

d. Immediately after disconnection the hydraulic lines shall be capped off to prevent contamination of the hydraulic system.

e. The appropriate deck hatch can now be removed in preparation for cylinder and gate bonnet removal.

f. Lifting devices, slings, etc. shall be installed and the cylinder and bonnet can be removed.

g. Once the cylinder is hanging above the deck an inspection of the ceramic coating on the rod shall be done. With caution, compressed air can be used to extend and retract the cylinder. Any residual oil exiting the ports shall be captured. This inspection shall be done in the presence of the Contracting Officer's Representative. Inconsistencies shall be documented.

h. Detailed O&M instructions for system operation and hydraulic system lock out are available at the Mud Mountain Dam project office.

### 3.13 METAL MACHINE WORK

For specifications see SECTION 05055 titled, METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

### 3.14 TOUCHUP PAINTING

Upon completion of equipment reinstallation some minor abrasions or chips may be present on the newly painted equipment, see SECTION 09965 titled PAINTING: HYDRAULIC STRUCTURES. This equipment will require brush touchup painting with the same system paint. These areas shall be degreased. Chipped areas shall be feathered out with sandpaper then a final wipe shall be done with a

clean tack cloth. Items other than those items listed in the painting spec and referenced previously and subject to coating damage from removal and handling shall be hand and/or machine sanded. A primer coat and 2 final matching coats of an alkyd enamel shall be applied either by brush or spray can. When possible, small items shall be taken outside the structure for painting and left until dried. All structures and equipment shall be protected from overspray and dust where needed.

### 3.15 FINAL INSPECTION

Upon completion of the project a final walk thru inspection shall be done. The Contractor shall demonstrate to the Contracting Officer's Representative and project personnel that the system has been restored to working condition by exercising each hydraulic cylinder thru one extend and retract cycle. The general condition and cleanliness of all equipment and structures affected by the Contract shall be observed. Paint touchup shall be inspected. After all cylinders have been cycled the primary hydraulic reservoir and the redundant hydraulic reservoir site gauges shall be observed for condition of the oil. No water shall be observed and minimal entrapped air bubbles shall be present. Any inconsistencies shall be corrected by the Contractor at no additional cost to the Government.

END OF SECTION

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## SECTION 05055

## METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS

## PART 1 GENERAL

This Section covers all work to be done in a shop setting. This to include any lifting device fabrication, temporary supports or brackets, disassembly, cleaning, validating existing cylinder part dimensions, machining of new and replacement metal parts, reassembly, inspection, and testing. This Contract shall produce clean, reconditioned, and newly painted cylinders absent of lake silt and any moisture damage. The cylinders shall also be guaranteed not to leak either water and/or oil as the case may be for a period of one year from the date of activation at the intake structure.

## 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 A 36/A 36M	(2001) Carbon Structural Steel
ASTM A 123/A 123M	(2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 193/193M	(2001b) Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
ASTM A 505	(2000) Steel, Sheet and Strip, Alloy, Hot-Rolled and Cold-Rolled
ASTM A 325	(1994) Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
ASM A 354	(2001) Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners e
ASTM A 380	(1994a) Cleaning and Descaling Stainless Steel Parts, Equipment, and Systems
ASTM A 780	(1993a) Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
ASTM B 271	(1996) Copper-Base Alloy Centrifugal Castings
ASTM B 505	(1996) Copper-Base Alloy Continuous Castings
ASTM E 165	(1995) Liquid Penetrant Examination Inspection Method

ASME INTERNATIONAL (ASME)

ASME B4.1 (1967; R 1994) Preferred Limits and Fits for Cylindrical Parts

ASME B46.1 (1985) Surface Texture (Surface Roughness, Waviness, and Lay)

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (1994) Structural Welding Code - Steel

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

### Shop Drawings

Detail Drawings; G-ED

Detail drawings for metalwork and machine work shall be submitted and approved prior to fabrication.

### Product Data

Purchased Items; G-ED

Seals, O-rings, excluders, scrapers, chevron seals, and wear rings. Data shall include catalogue cuts indicating model number, size, manufacturer, and recommended usage.

Materials List

Materials list for fabricated items shall be submitted at the time of submittal of detail drawings.

### Shop Test Procedures

Shall include sketches, drawings, written narratives, for each test system.; G-RE

### Test Reports

Final Test Reports; G-ED

A copy of final test reports indicating temperature and pressure versus time, conclusions, and recommendations if any

### Certificates

#### Qualification of Welders and Welding Operators; G-RE

Certifications for welders and welding operators shall be submitted prior to commencing fabrication.

#### Machine Shop Qualifications G-ED

Submit type written letter describing prior projects of this type and size and also a brief resume of machinists that will be performing the fabrications.

### 1.3 DETAIL DRAWINGS

Detail drawings for metalwork and machine work shall include catalog cuts, templates, fabrication and assembly details and type, grade and class of material as appropriate. Elements of fabricated items inadvertently omitted on contract drawings shall be detailed by the fabricator and indicated on the detail drawings. Drawings of existing dimensional data shall also be submitted as outlined in paragraph "Dimension Validation" below.

### 1.4 QUALIFICATION OF WELDERS AND WELDING OPERATORS

The Contractor shall certify that the qualification of welders and welding operators and tack welders who will perform structural steel welding have been qualified for the particular type of work to be done in accordance with the requirements of AWS D1.1 prior to commencing fabrication. The certificate shall list the qualified welders by name and shall specify the code and procedures under which qualified and the date of qualification. Prior qualification will be accepted if welders have performed satisfactory work under the code for which qualified within the preceding three months. The Contractor shall require welders to repeat the qualifying tests when their work indicates a reasonable doubt as to proficiency. Those passing the requalification tests will be recertified. Those not passing will be disqualified until passing. All expenses in connection with qualification and requalification shall be borne by the Contractor.

### 1.5 MACHINE SHOP QUALIFICATIONS

Shop work including disassembly, reassembly, and the machining of new parts as indicated shall be done by a machine shop with at least 5 years experience in fabrication and/or rehabilitating large hydraulic cylinders having at least a 4" dia. rod. Only workers under the supervision of qualified managers with machine experienced background shall perform disassembly and reassembly.

### 1.6 GOVERNMENT SHOP INSPECTION

**The first cylinder disassembly shall be performed in the presence of the Contracting Officer or his/her Representative unless waived in writing. A 14 calendar day notice shall be provided to the Contracting Officer of the proposed disassembly date.** This individual will travel to the Contractor's site at Government expense to witness this disassembly. Inspection will be made as the disassembly progresses for corrosion or damage attributed to water and also the extent of infiltration of river silt into the crevices of mating surfaces and seal glands. All discrepancies shall be recorded. Validation of dimensions may also be observed at this time.

## 1.7 REPAIR WORK

After the inspection and assessment of a cylinders condition by the Government and the Contractor; an equitable adjustment in Contract price may be required for repair of any damage or redesign. This repair may include honing of the cylinder to remove pitting caused by water corrosion.

## 1.8 EXISTING CYLINDER ASSEMBLY

Assembly details are indicated on the Contract drawings. Due to lack of available detail the actual assembly may vary slightly from that shown. Contractor shall make notations and sketches as the cylinder is being disassembled. The manufacturer's general assembly drawings for the cylinders and attachments will be available to review at the Mud Mountain Project Office, Seattle District Office, or the Omaha District Office. The drawings have similar detail to that furnished as reference drawings in the back of the Contract drawing set.

## 1.9 MODIFICATIONS TO RESOLVE WATER LEAKAGE INTO CYLINDERS

All cylinders are to be disassembled, cleaned, and reassembled as specified elsewhere within these specifications. In addition the following shall be done:

### 1.9.1 Radial Gates

A new chevron type seal design for sealing against water pressure is to be designed and installed on the radial gate cylinder R-3, only, making it totally submersible to 150 psi. In addition there are no seals in the joint between the gland and the lower flange of the cylinder. A joint sealing compound may have been applied. As indicated in the Contract drawings, there are several methods proposed for correcting this problem. Upon disassembly the Contractor shall submit a proposal. This joint is to be modified only on radial gate R-3.

### 1.9.2 Emergency Gates

The large mounting bonnet of the emergency (E) gates is to be modified and machined to physically separate the oil seal side from the water seal side. This then will allow inspection for leakage of the oil and water seals from the operating floor.

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### 2.1.1 Materials List

The Contractor shall furnish a materials list indicating manufacturer, model numbers, dimensions, and material for the materials to be used in the fabrication of each item as defined below or the material may be specified on the detail drawing to be submitted for approval. All existing seals, o-rings, and gaskets shall be accounted for and shall be boxed and turned over to the Government. **Failure to do so will be cause to classify this discrepancy as a major defect and may allow a deduction to the contract price.**

## 2.1.2 Cylinder Seal Glands

New seal glands shall be machined from carbon steel with strength and machinability equal to or greater than the ASTM A36.

## 2.1.3 Bolts, Machine Screws, Nuts, and Washers

### 2.1.3.1 Stainless Steel

Shall conform to ASTM A 193, Grade B7 or B16, with ASTM A 194, Grade 8 nuts.

### 2.1.3.2 Carbon Steel

Shall conform to ASTM A 354, Grade BC, with ASTM A 194, Grade 2H nuts. Structural bolted connections carrying primary loads shall meet ASTM A 325.

### 2.1.3.3 Flat Washers

Flat washers shall conform to ASTM F 844

## 2.1.4 Rod Bearing/Wear Rings

Material for all replacement and new bearing/wear rings shall be Nylatron NSM to match existing which is compatible with the ceramic rod coating. Nylatron is a proprietary type 6 nylon formulation using proprietary Monocast process with introduction of solid lubricant additive to impart self-lubrication at high pressure and velocity. Material shall be similar or equal to that available from:

Machinist Materials, Inc.  
P.O. Box 350304  
Fort Lauderdale, FL 33335-0304

E-mail: [sales@machinist-materials.com](mailto:sales@machinist-materials.com)  
<http://www.machinist-materials.com/contact.htm>

## 2.1.5 Rod Scraper/Wiper

All effort shall be made to match precisely the model and manufacturer of the existing scraper. It is suspected that the lip type seals, scrapers and excluders are mfg. by "Busak-Shamban as addressed below. If unable to match existing a new rod wiper shall be furnished and shall be a high-strength polyurethane scraper ring which will withstand the impact and the abrasion of materials adhering to the piston rod. Wiper shall be selected to fit within the dimensions of the existing machined grooves and glands, unless otherwise approved, and shall be similar or equal to that as available from:

American Variseal Corporation  
Busak + Shamban Seals Division  
Fort Wayne, Indiana  
Ph. 1-800-466-1727  
Fax 303-469-4874  
E-mail: [variseal@polymersealing.com](mailto:variseal@polymersealing.com)  
<http://www.variseal.com/home.htm>

#### 2.1.6 O-Rings

O-Rings shall be Buna-N or Viton and shall be designed for 2000 psi operating service.

#### 2.1.7 Chevron Seals

All effort shall be made to match precisely the model and manufacturer of the existing item. If unable to match existing; the replacement seals shall be of the low leakage V-ring, nonadjustable gland type, designed for 2000 psi on the interior oil side and 0 to 150 psi when used on the water or exterior side. Seals shall be selected to fit within the dimensions of the existing machined grooves and glands, unless otherwise approved. Material Buna-N & Duck.

#### 2.1.8 Seal Retainer Spacer

ASTM B505, Alloy No. C95400 or C93200, ASTM B271

#### 2.1.9 Seal Retainer

ASTM B505, Alloy No. C95400 or C93200, ASTM B271 centrifugally cast or otherwise approved

#### 2.1.10 Position Indicating Drive, Support

Material shall be as indicated on Contract drawings or specified here within.

#### 2.1.11 Piston Bearing/Wear Ring Sleeve

Piston Sleeves/Wear Rings shall be replacement for existing sleeves. Turcite Slydring to replace existing. Reference:<http://www.polymersealing.com>. Material available from:

Polymer Sealing Solutions  
39810 Grand River Avenue  
Suite 200  
Novi, Michigan 48375  
Ph. 1-800-767-3257

Other approved manufacturers may be used if compatible with existing seal glands.

#### 2.1.12 Hydraulic Hose

Flexible hydraulic lines shall be wire-reinforced, high-pressure-type hose made of neoprene or Buna N. Flexible hose shall be rated by the manufacturer for a working pressure not lower than the system operating pressure indicated above with a factor of safety of 4. Fittings shall be specifically designed for use with the hose selected and shall be as recommended by the hose manufacturer. Fittings shall be made of stainless steel and shall be the reusable type. Contractor to verify size and length in field prior to ordering.

### 2.1.13 Radial Gate Position Sensing Transducers

The existing transducers were manufactured by the MTS Systems Corporation. The existing transducer probes are rigid and run thru the center of the hoist rod. In this situation, repair or replacement requires the overhead hatches be removed to access the transducers.

The Contractor shall furnish, remove, and replace 3 existing transducers during the disassembly and subsequent reassembly of the R cylinders. Transducers shall be exact replacements for that which is there. Replacement transducers shall have a "flexible" type probe. Each transducer shall be equipped with a tubing sheath running the full length of the cylinder stroke to allow the probe to stay straight within the cylinder rod while the piston is reciprocating. Tube will actually be inside the rod cavity when cylinder is retracted. The diameter of the hole in the center of the cylinder rod is unknown. Transducers shall not be purchased until this hole size can be verified at the first cylinder disassembly. If existing hole is too small to accept the tube and flexible probe the Contracting Officer shall be notified. The replacement transducer may be dropped from the Contract if a satisfactory design cannot be achieved. An adjustment in Contract price would be made for the cost of the Transducers and tubing.

Existing Model Nos.

MTS No. 011153091100 for R-1 & R-2

MTS NO. 011108091100 for R-3

Transducers are available from West Coast Plastics Equipment,  
Ph. 800-392-8569, <http://www.westcoastplastics.com/>. Other suppliers are acceptable.

## 2.2 CHEVRON SEAL SPRING PRELOAD DEVICE

Device shall consist of a radial spring action that exerts even pressure on the circumference of the new chevron type water seal. Device shall be designed for use in preloading chevron type seal. Working pressure of this seal is 150 psig.

## 2.3 STRUCTURAL STEEL FABRICATION

This section is included to assure fabrication of safe and professionally constructed lifting devices, supports, or brackets that may be required to complete this Contract, and fabrications for the Emergency Gate Position Indicating Equipment. Lifting devices etc. that are custom made for this Contract shall become the property of the Government.

### 2.3.1 Structural Supports and Brackets

Material must be straight before being laid off or worked. If straightening is necessary it shall be done by methods that will not impair the metal. Sharp kinks or bends shall be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Bends shall be made by approved dies, press brakes or bending rolls. Where heating is required, precautions shall be taken to avoid overheating the metal and it shall be allowed to cool in a manner that will not impair the original properties of the metal. Proposed flame cutting of material other than structural steel shall be subject to approval and shall be indicated on detail drawings. Shearing shall be accurate and all portions of the work shall be neatly finished. Corners shall be square and true unless otherwise shown. Re-entrant cuts shall be filleted to a

minimum radius of 19 mm (3/4 inch) unless otherwise approved. Finished members shall be free of twists, bends and open joints. Bolts, nuts and screws shall be tight.

#### 2.3.1.1 Dimensional Tolerances for Structural Work

Dimensions shall be measured by an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit shall be within the tolerances indicated on the drawings or as specified in the particular section of these specifications for the item of work. Where tolerances are not specified in other sections of these specifications or shown, an allowable variation of 1 mm (1/32 inch) is permissible in the overall length of component members with both ends milled and component members without milled ends shall not deviate from the dimensions shown by not more than 2 mm (1/16 inch) for members 9 m (30 feet) or less in length and by more than 3 mm (1/8 inch) for members over 9 m (30 feet) in length.

#### 2.3.1.2 Cutting Structural Steel

Structural steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Surfaces and edges to be welded shall be prepared in accordance with AWS D1.1, Subsection 3.2. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Hand-guided cuts which are to be exposed or visible shall be chipped, ground or machined to sound metal.

#### 2.3.2 Welding

##### 2.3.2.1 Welding of Structural Steel

- a. Welding Procedures for Structural Steel - Welding procedures for structural steel shall be pre-qualified as described in AWS D1.1, Subsection 5.1 or shall be qualified by tests as prescribed in AWS D1.1, Section 5. Properly documented evidence of compliance with all requirements of these specifications for previous qualification tests shall establish a welding procedure as pre-qualified.
- b. Welding Process - Welding of structural steel shall be by an electric arc welding process using a method which excludes the atmosphere from the molten metal and shall conform to the applicable provisions of AWS D1.1, Sections 1 thru 7, 9, 10 and 11. Welding shall be such as to minimize residual stresses, distortion and shrinkage.
- c. Welding Technique
  - (1) Filler Metal - The electrode, electrode-flux combination and grade of weld metal shall conform to the appropriate AWS specification for the base metal and welding process being used or shall be as shown where a specific choice of AWS specification allowables is required. The AWS designation of the electrodes to be used shall be included in the schedule of welding procedures. Only low hydrogen electrodes shall be used for manual shielded metal-arc welding regardless of the thickness of the steel. A controlled temperature storage oven shall be used at the job site as prescribed by AWS D1.1, Subsection 4.5 to maintain low moisture of low hydrogen electrodes.

(2) Preheat and Interpass Temperature - Preheating shall be performed as required by AWS D1.1, Subsection 4.2 and 4.3 or as otherwise specified except that the temperature of the base metal shall be at least 20 degrees C. (70 degrees F.) The weldments to be preheated shall be slowly and uniformly heated by approved means to the prescribed temperature, held at that temperature until the welding is completed and then permitted to cool slowly in still air.

d. Workmanship - Workmanship for welding shall be in accordance with AWS D1.1, Section 3 and other applicable requirements of these specifications.

### 2.3.3 Tests, Inspections, and verifications

#### 2.3.3.1 Nondestructive Testing

When doubt exists as to the soundness of any material part such part may be subjected to any form of nondestructive testing determined by the Contracting Officer. This may include ultrasonic, magnaflux, dye penetrant, x-ray, gamma ray or any other test that will thoroughly investigate the part in question. The cost of such investigation will be borne by the Government. Any defects will be cause for rejection and rejected parts shall be replaced and retested at the Contractor's expense.

## 2.4 HYDRAULIC CYLINDER WORK

### 2.4.1 Disassembly and Cleaning

Each cylinder shall be completely disassembled. Disassembly is to include but shall not be limited to: Removal of both heads, removal of rod, disassembly of piston, locking cylinder, and valve block, removal and subsequent replacement of all seals. Each item shall be thoroughly flushed with a cleaning solvent to remove any foreign substances. Item shall then be wiped down with a clean lint free cloth. This wipe down shall again be done just prior to reassembly. Solvent shall be compatible with all materials it will contact

### 2.4.2 Dimension Validation

During cylinder disassembly the machine shop shall obtain dimensional data necessary to complete the design of the new or verify dimensions of existing seal glands for the R-1, R-2, & R-3 radial gate cylinder rod end and also for the emergency gate bonnet cover modifications as indicated in Contract drawings. Measuring tools shall be used to obtain accuracy to ten thousandths of an inch for machined surfaces. Contractor shall create and submit drawing sketches with the measurements taken of the cylinders. Only dimensions necessary for the completion of this Contract are required to be validated. **Failure to do so will be cause to classify this discrepancy as a major defect and may allow a deduction to the contract price.**

### 2.4.3 Tolerancing and Fits

Tolerances, allowances and gauges for metal fits between plain, non-threaded, cylindrical parts shall conform to ASME B4.1 for the class of fit shown or required unless otherwise shown on approved detail drawings. Where fits are not shown they shall be suitable as approved. Tolerances for machine-finished surfaces designated by non-decimal dimensions shall be within 400 m. (1/64 inch.) Parts shall be accurately machined and all like parts shall be interchangeable except that parts assembled together

for drilling or reaming of holes or machining will not be required to be interchangeable with like parts. All drilled bolt holes shall be accurately located.

#### 2.4.3.1 Finished Surfaces

Surface finishes indicated or specified shall be in accordance with ASME B46.1. Values of required roughness heights are arithmetical average deviations expressed in micrometers. (micro inches.) These values are maximum. Lesser degrees will be satisfactory unless otherwise indicated. Compliance with surface requirements shall be determined by sense of feel and visual inspection of the work compared to Roughness Comparison Specimens in accordance with the provisions of ASME B46.1. Values of roughness width and waviness height shall be consistent with the general type of finish specified by roughness height. Where the finish is not indicated or specified it shall be that which is most suitable for the particular surface, provide the class of fit required and be indicated on the detail drawings by a symbol which conforms to ASME B46.1 when machine finishing is provided. Flaws such as scratches, ridges, holes, peaks, cracks or checks which will make the part unsuitable for the intended use will be cause for rejection.

#### 2.4.3.2 Unfinished Surfaces

All work shall be preplanned to obtain proper matching of adjoining unfinished surfaces unless otherwise directed. Where there is a large discrepancy between adjoining unfinished surfaces they shall be chipped and ground smooth or machined to secure proper alignment. Unfinished surfaces shall be true to the lines and dimensions shown and shall have a maximum of 250 micro inch surface finish.

#### 2.4.3.3 Dowel Pin Holes

Where shown; dowel pin holes shall be drilled and reamed true to required tolerances, smooth, straight and at right angles to the axis of the member. The installation shall be done prior to disassembly of existing equipment.

#### 2.4.4 Miscellaneous Provisions

##### 2.4.4.1 Galvanizing (Zinc Coating)

Zinc Coatings - Zinc coating shall be applied in a manner and of a thickness and quality conforming to ASTM A 123. Where the zinc coating is destroyed by cutting, welding or other causes the affected areas shall be re-galvanized. Coating 50 g (2 ounces) or heavier shall be re-galvanized with a suitable low-melting zinc base alloy similar to the recommendations of the American Hot-Dip Galvanizers Association to the thickness and quality specified for the original zinc coating. Coatings less than 50 g (2 ounces) shall be repaired in accordance with ASTM A 780.

##### 2.4.4.2 Cleaning of Corrosion-Resisting Steel

Oil, paint and other foreign substances shall be removed from corrosion-resisting steel surfaces after fabrication. Cleaning shall be done by vapor degreasing or by the use of cleaners of the alkaline, emulsion or solvent type. After the surfaces have been cleaned they shall be given a final rinsing with clean water followed by a 24 hour period during which the surfaces are intermittently wet with clean water and then allowed to dry for the purpose of inspecting the clean surfaces. The surfaces shall be visually inspected for evidence of paint, oil, grease, welding slag, heat treatment scale, iron rust or other forms of contamination. If evidence of foreign substance exist the surface shall be cleaned in

accordance with the applicable provisions of ASTM A 380. The proposed method of treatment shall be furnished for approval. After treatment the surfaces shall be visually re-inspected. Brushes used to remove foreign substances shall have only stainless steel or nonmetallic bristles. Any contamination occurring subsequent to the initial cleaning shall be removed by one or more of the methods indicated above.

#### 2.4.4.3 Lubrication

Before reassembly all bearing surfaces shall be thoroughly cleaned and lubricated with an approved lubricant.

#### 2.4.5 Replace

During disassembly and subsequent reassembly of the 3 (R) gate cylinders in the shop the existing rod type position transducers shall be replaced with the "flexible" type

#### 2.4.6 Shop Assembly

Subassemblies shall be assembled in the shop to determine the correctness of the fabrication and matching of the component parts unless otherwise specified. Tolerances shall not exceed those shown. Each unit assembled shall be closely checked to ensure that all necessary clearances have been provided and that binding does not occur in any moving part. Assembly in the shop shall be in the same position as final installation in the field unless otherwise specified. **First Cylinder Assembly work shall be performed in the presence of the Contracting Officer unless waived in writing. A 14 calendar day notice shall be provided to the Contracting Officer's Representative of the proposed test date.** Errors or defects disclosed shall be immediately remedied by the Contractor without cost to the Government. Before disassembly for shipment each piece of a machinery or structural unit shall be match-marked to facilitate erection in the field. Special attention shall be made to the alignment of the emergency gate cylinder rods with the new water seal gland in the bonnet. Either shop assembly, assembly with a dummy rod, or assembly and alignment in the field shall be done.

#### 2.4.7 Bolts

Bolts used for assembling structural steel components shall meet the requirements of ASTM A325

### PART 3 EXECUTION

#### 3.1 INSTALLATION

For Installation details see spec SECTION 05054 titled WORK AT INTAKE STRUCTURE.

#### 3.2 PROTECTION OF FINISHED WORK

##### 3.2.1 Machined Surfaces

Machined surfaces shall be thoroughly cleaned of foreign matter. All finished surfaces shall be protected by suitable means. Unassembled pins and bolts shall be oiled and wrapped with moisture resistant paper or protected by other approved means. Finished surfaces of ferrous metals to be in bolted contact shall be washed with an approved rust inhibitor and coated with an approved rust

resisting compound for temporary protection during fabrication, shipping and storage periods. Finished surfaces of metals shall be painted/coated where indicated on Contract drawings.

### 3.2.2 Lubrication After Assembly

After assembly the cylinders shall be pre-filled in the shop as required for testing and to aid in the elimination of entrapped air. Hydraulic fluid shall be as specified in SECTION 05054; WORK AT INTAKE STRUCTURE.

## 3.3 SHOP TESTS

Internal tests are being conducted to verify correct installation of high pressure seals, o-rings, etc. The external tests are being conducted not only to verify correct design and installation of the new low pressure water seals, but also to check the validity of the whole cylinder assembly for water tightness. Equipment and methods shown herein and on the Contract drawings are included to demonstrate the functionality of a test. Other procedures and equipment as approved may be submitted by the Contractor for approval. A shop test procedure for both tests shall be submitted.

### 3.3.1 Test Equipment and Setup

Internal test equipment shall be a standard setup used normally in the Contractor's shop to test both sides of large cylinders. Certified and calibrated measuring equipment shall be used and shall be of the best quality and accuracy. The external leakage test apparatus as detailed on drawing sheet 17 shall be built to suit the Contractor. The Contractor shall, after fabrication and assembly, test the apparatus for leakage. The mass of the external test apparatus shall be allowed to acclimatize for up to 5 days to the shop's interior temperature. Heating may be used to speed acclimation. After cylinder is installed in the container the container shall be filled with water. This water and again the container will be allowed to also acclimate to shop temperature. Prior to the tests a temperature reading of the water and of the steel container shall be taken and compared to the room temperature at the time. Test room temperature shall be closely regulated during the test period. All testing equipment shall remain the property of the Contractor for final disposal.

#### 3.3.1.1 Internal Pressure Test

Upon reassembly of all cylinders in the shop; both ends of the cylinder shall be filled with oil. A leakage and operational test shall then be performed. Each side of the piston shall be independently pressurized to 2000 psig with the opposing side being filled with oil and the outlet being open to atmosphere. The cylinder will then be monitored for hydraulic fluid leakage for a period of twenty (20) minutes. If any leakage is observed; a disassembly will be required and the source of leakage shall be found. If the leakage is a result of the Contractor's work it shall be corrected at the Contractor's expense and the cylinder retested. If it is a result of original cylinder design prior to this Contract the Government will review the problem and subsequently make an equitable adjustment to the Contract price for redesign, repair and retesting. **Tests shall be performed in the presence of the Contracting Officer or his/her Representative unless waived in writing. A 14 calendar day notice shall be provided to the Contracting Officer of the proposed disassembly date.**

#### 3.3.1.2 External Pressure Test

Upon the completion of the internal pressure test of R-1, R-2, and R-3 cylinders only, the oil shall be drained from both sides of the piston. Interior need not be dry of oil. Plugs or blocking plates with

gaskets shall be installed to the extent needed to isolate the interior of the cylinders. Each cylinder **beginning with R-3** shall then be loaded into the test apparatus as detailed on Sheet 17 of the Contract drawings. The container shall be placed in a sloped position with the open valve on the higher side. Water shall be added to the opposite inlet in such a way as to keep and bleed all air from the container. The valves shall be closed with only the manometer connected to the container. The container shall then be pressurized with air thru the "schrader type" air valve to bring pressure up to 150 psig. A highly accurate thermometer shall be mounted at the test area and shall not be handled during the tests. The pressure at the manometer and the room temperature shall be monitored for a period of 4 hours. Every 15 minutes a reading shall be recorded from the thermometer and the manometer. If fluctuations in pressure are occurring they will be compared to the room temperature readings. A water leak to the cylinder will be present if a dramatic pressure drop is recorded. This will be cause for rejection of the cylinder and the test need not continue. The cylinder shall then be disassembled at the Contractor's expense. The problem shall be identified, fixed, cylinder reassembled and retested the full 4 hours until a valid test is obtained. The Contractor shall be responsible for furnishing water tight cylinders at no additional costs to the Government.

### 3.3.2 Painting

Equipment removed from the intake structure shall be cleaned and repainted as assemblies ready for reinstallation after final shop testing as described above. See SECTION 09965 titled PAINTING: HYDRAULIC STRUCTURES. When handling and cleaning the ceramic coating and other areas as defined in above specification shall be well protected from impact and blasting

### 3.3.3 Transport

Cylinders shall be prepared for shipment in the same manner as used for shipping from the Intake Site. Ceramic rods shall be protected and extended if required to eliminate excessive distortion of the rod.

END OF SECTION

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## SECTION 05502

## METALS: MISCELLANEOUS, STANDARD ARTICLES, SHOP FABRICATED ITEMS

## 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 A 36/A 36M	(1996) Carbon Structural Steel
ASTM A 53	(1996) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A 123	(1989a) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 153/A 153M	(1995) Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A 325	(1996) Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
ASME B18.2.2	(1987; R 1993) Square and Hex Nuts (Inch Series)

## ENGINEERING MANUALS (EM)

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

FS RR-C-271	(Rev D) Chains and Attachments, Welded and Weldless
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## NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM MBG 531	(1993) Metal Bar Grating Manual
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## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

### Shop Drawings

#### Shop Fabricated Metal Items; G

Detail drawings shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

### Product Data

#### Miscellaneous Metals and Standard Metal Articles

##### Shop Fabricated Metal Items

Lists of materials shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

Records which identify the disposition of approved material and fabricated items in the work must be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

### Samples

#### Miscellaneous Metals and Standard Metal Articles

##### Shop Fabricated Metal Items

Samples shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS. Samples of standard or fabricated items shall be full size and complete as required for installation in the work, and may be installed in the work, provided each sample is clearly identified and its location recorded.

### Test Reports

#### Miscellaneous Metals and Standard Metal Articles

##### Shop Fabricated Metal Items

Certified test reports for materials tests and analyses shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

## 1.3 FABRICATION AND WORKMANSHIP REQUIREMENTS

Fabrication requirements and workmanship provisions for items specified in this section shall conform with the requirements of Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

## PART 2 PRODUCTS

### 2.1 MISCELLANEOUS METALS AND STANDARD METAL ARTICLES

Miscellaneous metal materials and standard metal articles shall conform to the respective specifications and other designated requirements. Sizes shall be as specified or shown. Where material requirements are not specified, materials furnished shall be suitable for the intended use and shall be subject to approval.

#### 2.1.1 Structural Steel

ASTM A 36/A 36M.

#### 2.1.2 Steel Pipes and Pipe Fittings

##### 2.1.2.1 Pipes

ASTM A 53, Type S, Grade B, seamless galvanized, nominal size and weight class or outside diameter and nominal wall thickness as shown, plain ends.

##### 2.1.2.2 Pipe Fittings

a. Butt-welding - ASME B16.9.

#### 2.1.3 Bolts, Nuts, and Washers

Bolts, nuts, and washers shall be of the material, grade, type, class, style and finish indicated or best suited for intended use.

##### 2.1.3.1 High-Strength Bolts, Nuts, and Washers

ASTM A 325, Type C, hot-dip galvanized.

#### 2.1.4 Expansion Anchors

Expansion anchor, shall be type as required, except that nail driven types will not be acceptable, galvanized unless otherwise indicated.

#### 2.1.5 Chains and Attachments

FS RR-C-271, Type 1, Grade C, Class 5, Style twistlink, Size 5/0, Finish HG.

#### 2.1.6 Floor Gratings

NAAMM MBG 531S for welded steel construction.

a. Description of grating: Fabricate grating as follows:

Bearing bars - 1 1/2 inch by 3/16 inch, spaced 1 3/16 inches on center.

Cross bars - spaced 4 inches on center.

Top surfaces shall be serrated.

- b. Anchorage: Grating end bearing on ledger angles shall be a minimum of 3 1/2 inches.
- c. Finish: steel zinc-coated in accordance with ASTM A 123 after fabrication, and steel hardware and fasteners completely zinc-coated in accordance with ASTM A 153.

## 2.2 SHOP FABRICATED METAL ITEMS

### 2.2.1 Railings

Railings shall be of the type specified and shown and shall be furnished and installed complete with all fittings, brackets, fasteners, sleeves, anchors, and other appurtenances as shown and as required for proper installation.

#### 2.2.1.1 Materials

Steel railings shall be of steel as specified in paragraph PIPE. Sleeves and other appurtenances shall be of the same material as the rails and posts or approved compatible materials.

#### 2.2.1.2 Fabrication

Rigid joints in railings shall be welded, fittings and shall be flush-finished. Welded joints shall be assembled by mitering and welding joining rails and posts. Welds shall be ground smooth. Railings shall be free of burrs, sharp corners, and sharp edges. For railings of other than welded assembly, manufacturer design calculations, showing that the installed railings are capable of withstanding a design working load of 200 pounds applied in any direction at any point on the top rail without permanent deformation, must be submitted and approved prior to installation.

#### 2.2.1.3 Installation

Railings shall be installed as specified and shown. Railing posts anchored to concrete surfaces perpendicular to the posts shall be rigidly secured to flange fittings anchored to concrete with expansion anchors. Railing posts anchored to concrete surfaces parallel to the posts shall have the sides of posts continuously welded to base plates anchored to concrete with expansion anchors. Railing posts anchored to structural metal shall be welded to base plates and base plates bolted to structural members. Ends of rails anchored to concrete or masonry shall be rigidly secured to flange fittings anchored to concrete or masonry with expansion anchors.

### 2.2.2 Gratings

Grating shall be of the material and size shown, and shall be fabricated in sectional panels of the width and length shown, or as appropriate, to accurately fit within the supporting recess frames. Openings through panels shall be provided as shown or as required. Hinged panels shall be provided with hinges of the type shown or suitable for the application. Steel gratings shall be galvanized after fabrication.

#### 2.2.2.1 Grating

Gratings shall be as specified in paragraph FLOOR GRATINGS. Fasteners shall be of the type recommended by the manufacturer and approved.

#### 2.2.3 Ladders

Ladders shall be fixed-rail metal ladders conforming to the requirements of EM 385-1-1 and to details shown. Ladders shall be fabricated of structural steel as shown and shall be galvanized after fabrication. Fabrication of ladders shall consist of solid-section rod rungs fitted into holes in bar side rails and welded. Splices in side rails shall be made using full penetration welds and shall provide a flush and smooth transition between connecting ends. All welds shall be ground smooth. Ladder rails shall be welded to bent-bar supporting brackets anchored to supporting structure as shown.

#### 2.2.4 Ladder Rungs

Ladder rungs shall be fabricated from steel rods in accordance with the details and shall be galvanized after fabrication.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

Install items at locations indicated, according to manufacturer's instructions.

END OF SECTION

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## SECTION 09965

## PAINTING: HYDRAULIC STRUCTURES

## PART 1 GENERAL

Sand blast and coat hydraulic cylinders of varying sizes, rod extension tube sections, and bonnet covers as detailed on the drawings. Existing coating system is less than 10 years old and assumes that no lead, cadmium or PCB's is present. Contractor shall still verify that existing coating system contains no lead, cadmium or PCB's. An on-site staging area that can be used as work area for painting is shown on drawing Plate M1.02.

## 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 NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z87.1 (1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection

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

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 12 (1988; R 1998) Raw Tung Oil

ASTM D 153 (1986; R 1996el) Specific Gravity of Pigments

ASTM D 304 (1995; R 1999) n-Butyl Alcohol (Butanol)

ASTM D 520 (1984; R 1995el) Zinc Dust Pigment

ASTM D 561 (1982; R 1999) Carbon Black Pigment for Paint

ASTM D 740 (1994; R 1997) Methyl Ethyl Ketone

ASTM D 841 (1997) Nitration Grade Toluene

ASTM D 962 (1981; R 1999) Aluminum Powder and Paste Pigments for Paints

ASTM D 1045 (1995) Sampling and Testing Plasticizers Used in Plastics

ASTM D 1152 (1989; R 1997) Methanol (Methyl Alcohol)

ASTM D 1153 (1994; R 1997) Methyl Isobutyl Ketone

ASTM D 1186	(1993) Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base
ASTM D 1200	(1994; R 1999) Viscosity by Ford Viscosity Cup
ASTM D 1210	(1996) Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage
ASTM D 1308	(1987; R 1998) Effect of Household Chemicals on Clear and Pigmented Organic Finishes
ASTM D 1400	(1994) Nondestructive Measurement of Dry Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base
ASTM D 1475	(1998) Density of Paint, Varnish, Lacquer, and Related Products
ASTM D 1640	(1995; R 1999) Drying, Curing, or Film Formation of Organic Coatings at Room Temperature
ASTM D 2369	(1998) Volatile Content of Coatings
ASTM D 2917	(1991; R 1998) Methyl Isoamyl Ketone
ASTM D 3721	(1983; R 1999) Synthetic Red Iron Oxide Pigment
ASTM D 4206	(1996) Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus
ASTM D 4417	(1993; R 1999) Field Measurement of Surface Profile of Blast Cleaned Steel
ASTM E 1347	(1997) Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry

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

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.20	Access to Employee Exposure and Medical Records
29 CFR 1910.94	Ventilation
29 CFR 1910.134	Respiratory Protection
29 CFR 1910, Subpart I	Personal Protective Equipment
29 CFR 1926	Safety and Health Regulations for Construction

40 CFR 50.6	National Primary and Secondary Ambient Air Quality Standards for Particulate Matter
40 CFR 50, App B	Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere
40 CFR 58, App E	Probe Siting Criteria for Ambient Air Quality Monitoring
40 CFR 60, App A, Mtd 22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares
40 CFR 117	Determination of Reportable Quantities for Hazardous Substances
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261, App III	Chemical Analysis Test Methods
40 CFR 261, App II, Mtd 1311	Toxicity Characteristic Leaching Procedure (TCLP)
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 262.22	Number of Copies
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171, Subchapter C	Hazardous Materials Regulations
U.S. GENERAL SERVICES ADMINISTRATION (GSA)	
FED-STD-595	(Rev B, Notice 1) Colors Used in Government Procurement
U.S. ARMY CORPS OF ENGINEERS (USACE)	
EM 385-1-1	(1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)	
NFPA 70	(1999) National Electrical Code

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 98-119 (1998, 4th Ed., 2 Supplement) NIOSH Manual of Analytical Methods

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC Guide 6 (1995) Containing Debris Generated During Paint Removal Operations

SSPC SP 5/Nace No. 2 (1994) White Metal Blast Cleaning

1.2 (NOT USED)

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

Product Data

Safety and Health Provisions; G-RE

The Contractor shall submit an Accident Prevention Plan in accordance with the requirements of Section 01 of EM 385-1-1. The plan shall include, but is not limited to, each of the topic areas listed in Appendix A therein and the requirements of paragraph SAFETY AND HEALTH PROVISIONS; each topic shall be developed in a concise manner to include management and operational aspects.

Confined Spaces; G-RE

The Contractor shall submit detailed written standard operating procedures for confined spaces in accordance with 29 CFR 1910.146 and EM 385-1-1, Section 6I, and as further described in this paragraph.

a. The procedures shall include certificates of calibration for all testing and monitoring equipment. The certificates of calibration shall include: type of equipment, model number, date of calibration, firm conducting calibration, and signature of individual certifying calibration.

b. The procedures shall include methods of inspection of personal protective equipment prior to use.

c. The procedures shall include work practices and other engineering controls designed to reduce airborne hazardous chemical exposures to a minimum.

d. The procedures shall include specification of the design and installation of ventilation systems which shall provide adequate oxygen content and provide for the dilution of paint solvent vapor, lead, and other toxic particulates within the confined space. In addition, the contractor shall include plans to evaluate the adequacy of air flow patterns.

#### Certified Laboratory; G-RE

The Contractor shall submit a comprehensive written respiratory protection program in accordance with 29 CFR 1910.134, 29 CFR 1926.62, and Section 05.E of EM 385-1-1.

#### Airborne Sampling Plan; G-RE

The contractor shall submit an Airborne Sampling Plan detailing the NIOSH Pub No. 98-119, Factory Mutual, or Underwriters Laboratories approved equipment, equipment calibration procedures, sampling methods, sampling to be performed, and analytical procedures to be used based on the type of work to be performed and anticipated toxic contaminants to be generated. The contractor shall include the name of the accredited laboratory, listed by the American Industrial Hygiene Association (AIHA), to be used to conduct the analysis of any collected air samples.

#### Ventilation; G-RE

The contractor shall submit a plan to provide ventilation assessment as required by paragraph PAINT APPLICATION, subparagraph VENTILATION.

#### Medical Status; G-RE

The Contractor shall submit a Medical Surveillance Plan as required in paragraph MEDICAL STATUS and provide a statement from the examining physician indicating the name of each employee evaluated and any limitations which will preclude the employee from performing the work required. The statement shall include the date of the medical evaluation, the physician's name, signature, and telephone number.

#### Environmental Protection; G-RE

The Contractor shall submit an Environmental Compliance Plan. The plan shall incorporate the submittals for Soil Quality Plan, Ambient Air Monitoring Plan, and Visible Emissions Monitoring Plan. The submitted plan shall also address all aspects of establishing and demarcating regulated areas, ventilation/containment system performance verification, and reporting of accidental releases.

#### Waste Classification, Handling, and Disposal; G-RE

The contractor shall submit a Waste Classification, Handling, and Disposal Plan in accordance with the requirements of 40 CFR 261 and 40 CFR 262 and paragraph Waste Classification, Handling, and Disposal.

#### Containment; G-RE

The Contractor shall submit a plan for containing debris generated during paint removal operations in accordance with the requirements of paragraph Containment. The plan shall include drawings, and wind load calculations. When the design is such that the spent abrasive is allowed to accumulate in quantities greater than 1,000 pounds, the contractor shall have the drawings approved by a registered structural engineer. The drawings and calculations shall be stamped with the engineer's seal. The contractor shall also identify the type and placement of water booms, methods for anchoring the booms, and the procedures for removing debris.

#### Visible Emissions Monitoring; G-RE

The Contractor shall submit a Visible Emissions Monitoring Plan in accordance with the paragraph Visible Emissions Monitoring. The plan shall include the provisions for halting work and correcting the containment in the event unacceptable emissions are observed. General statements shall not be used; specific methods, procedures, and details are required.

#### Soil Quality Plan; G-RE

For all job sites where hazardous paint will be removed, the Contractor shall submit a Soil Quality Plan. The plan shall include provisions for halting the work should soil contamination occur, correcting the deficiencies responsible for the contamination, and provide procedures for removing and replacing contaminated soil.

### Samples

#### Specification and Proprietary Paints; G-RE

The Contractor shall submit samples of all special paint formula. For products that are specified to be applied in accordance with the manufacturer's recommendations the Contractor shall submit the paint producer's product data sheet or other written instructions for those products. When the required quantity of any type is 50 gallons or less, the Contractor shall submit in lieu of the liquid paint sample:

a. A certified test report showing the results of required tests made on the material and a statement that it meets all of the specification requirements.

b. A certified test report showing the results of required tests made on a previous batch of paint produced by the same firm using the same ingredients and formulation except for minor differences necessitated by a color change and a statement that the previous batch met all of the specification requirements. A report of tests on the proposed batch showing the following properties applicable to the material specifications shall be furnished: color, gloss, drying time, opacity, viscosity, weight per gallon (liter), and fineness of grind.

#### Thinners; G-RE

Samples shall be submitted of the thinners which are those solvents used to reduce the viscosity of the paint.

SD-06 Test Reports

TSP Monitoring Report; G-RE

The Contractor shall submit reports of the TSP monitoring tests as described in paragraph TSP Monitoring.

Airborne Sampling Report; G-RE

The Contractor shall submit reports of airborne sampling tests as required by paragraph Airborne Sampling.

Soil Quality Report; G-RE

The Contractor shall submit the results of the prework and post work soil quality tests in accordance with the requirements of paragraph Soil Quality.

Inspection and Operation Records; G-RE

The Contractor shall submit records of inspections and operations performed in accordance with paragraph INSPECTION. Submittals shall be made on a daily basis.

Certificates

Qualifications and Experience; G-RE

The Contractor shall submit certification pursuant to paragraph QUALIFICATIONS for all job sites. Submittal of the qualifications and experience of any additional qualified and competent persons employed to provide on-site environmental, safety, and health shall also be provided. Acceptance of this submission must be obtained prior to the submission of other required environmental, safety, and health submittal items.

Qualified Painting Contractor; G-RE

The Contractor shall submit a copy of their current SSPC QP 1 certification.

Qualified Coating Thickness Gages; G

Documentation of manufacturer's certification shall be submitted for all coating thickness gages.

1.4 QUALIFICATIONS

Qualifications and experience shall comply with the following.

1.4.1 Certified Professional

The Contractor shall utilize a qualified and competent person as defined in Section 01 of EM 385-1-1 to develop the required safety and health submittal and to provide on-site safety and health services during the contract period. The person shall be a Certified Industrial Hygienist (CIH), an Industrial

Hygienist (IH), or a Certified Safety Professional (CSP) with a minimum of 3 years of demonstrated experience in similar related work. The Contractor shall certify that the Certified Industrial Hygienist (CIH) holds current and valid certification from the American Board of Industrial Hygiene (ABIH), that the IH is considered board eligible by written confirmation from the ABIH, or that the CSP holds current and valid certification from the American Board of Certified Safety Professionals. The CIH, IH, or CSP may utilize other qualified and competent persons, as defined in EM 385-1-1, to conduct on-site safety and health activities as long as these persons have a minimum of 2 years of demonstrated experience in similar related work and are under the direct supervision of the CIH, IH, or CSP. For lead containing jobsites, the competent and qualified person shall have successfully completed an EPA or state accredited lead-based paint abatement Supervisor course specific to the work to be performed and shall possess current and valid state and/or local government certification, as required.

#### 1.4.2 Certified Laboratory

The Contractor shall provide documentation that includes the name, address, and telephone number of the laboratories to be providing services. In addition, the documentation shall indicate that each laboratory is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that each is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT) and will document the date of current accreditation. Certification shall include accreditation for heavy metal analysis, list of experience relevant to analysis of lead in air, and a Quality Assurance and Quality Control Program.

#### 1.4.3 Qualified Painting Contractor

The Contractor shall be a certified SSPC-QP 1 Painting Contractor or a National Association of Corrosion Engineers (NACE) certified Paint Inspector.

#### 1.4.4 Qualified Paint Applicator

Documentation of certification shall be submitted for all paint applicators. Prior to the initiation of any work all paint applicators shall be tested and certified as meeting the requirements of the qualified paint applicator. Certification shall be administered by the government approved independent third party Test Agency. Applicators failing the certification test shall not be permitted to apply any paint on the project.

##### 1.4.4.1 Test Plate

The test plate shall consist of a 6 feet by 6 feet steel plate with a 3/8-inch minimum thickness. The test plate shall have at least six bolts, three with bolt heads exposed and three with threads exposed, a 12-inch wide flange and a 6-inch diameter pipe each 18 inches long welded perpendicular to the test panel and a 6-inch deep T-beam with sealed ends welded horizontal across the test panel one foot up from the bottom all within the area to be painted on one side. Bolts shall be 1-inch minimum diameter.

##### 1.4.4.2 Certification Test Procedure

Certification testing of paint applicators shall be conducted at the job site in coordination with the Contracting Officer. The Contractor shall supply the fabricated test plates to be used for the tests and shall provide crane service, rigging, and any other work necessary to provide accessibility for the certification testing and inspection. In preparation, the Contractor shall clean and prepare the test plates in accordance with the requirements of the contracted work. Abrasive blasting shall be

performed with the blast media to be used in the contract. The paints to be applied shall be the Contractor supplied materials and shall be those previously tested and approved for use on the contract. Paints shall be applied as specified in the contract. The painter being tested shall mix and thin the paints to be used in the test and shall set up and adjust the application equipment for use. Each painter shall apply each of the types of paint comprising the specified system. The test plate shall be painted in a near vertical position.

#### 1.4.4.3 Certification Criteria

The paint applicator shall be evaluated based on the conformance of the applied paint system to the requirements of the specifications. Deficiencies in the coatings, improper mixing or improper application methods are basis for failure. The National Association of Corrosion Engineers (NACE) Certified Paint Inspector shall be the sole judge as to the acceptability of each paint applicators performance.

#### 1.4.4 Coating Thickness Gage Qualification

Documentation of certification shall be submitted for all coating thickness gages. Magnetic flux thickness gages as described in ASTM D 1186 shall be used to make all coating thickness measurements on ferrous metal substrates. Eddy current thickness gages as described in ASTM D 1400 shall be used to measure coating thickness on all nonferrous metal substrates. Gages shall have an accuracy of +/- 3 percent or better. Gages to be used on the job shall be certified by the manufacturer as meeting these requirements.

#### 1.4.5 Paint Application Quality Control

The Contractor shall submit for review and acceptance the credentials of the Contractors' painting personnel painting (including shop, field touch-up and repainting) quality control personnel. Quality control personnel shall operate under the direct charge of an independent third party NACE Certified Inspector. All work specified herein shall be conducted only when the NACE Certified Paint Inspector is present on the jobsite full time. The paint supplier shall have a Material Technical Representative (MTR) on site during all paint testing activities.

### 1.5 SAMPLING AND TESTING

The Contractor shall allow at least 30 days for sampling and testing. Sampling may be at the jobsite or source of supply. The Contractor shall notify the Contracting Officer when the paint and thinner are available for sampling. Sampling of each batch shall be witnessed by the Contracting Officer unless otherwise specified or directed. A 1-quart sample of paint and thinner shall be submitted for each batch proposed for use. The sample shall be labeled to indicate formula or specification number and nomenclature, batch number, batch quantity, color, date made, and applicable project contract number. Testing will be performed by the Government. Costs for retesting rejected material will be deducted from payments to the Contractor at the rate of \$600 dollars for each paint sample retested and \$600 dollars for each thinner retested.

### 1.6 SAFETY AND HEALTH PROVISIONS

Work shall be performed in accordance with the requirements of 29 CFR 1910, 29 CFR 1926, EM 385-1-1, and other references as listed herein. Matters of interpretation of the standards shall be submitted to the Contracting Officer for resolution before starting work. Where the regulations conflict, the most

stringent requirements shall apply. Paragraph SAFETY AND HEALTH PROVISIONS supplements the requirements of EM 385-1-1, paragraph (1). In any conflict between Section 01 of EM 385-1-1 and this paragraph, the provisions herein shall govern.

#### 1.6.1 Abrasive Blasting

The Contractor shall comply with the requirements in Section 06.H of EM 385-1-1.

##### 1.6.1.1 Hoses And Nozzles

In addition to the requirements in Section 20 of EM 385-1-1, hoses and hose connections of a type to prevent shock from static electricity shall be used. Hose lengths shall be joined together by approved couplings of a material and type designed to prevent erosion and weakening of the couplings. The couplings and nozzle attachments shall fit on the outside of the hose and shall be designed to prevent accidental disengagement.

##### 1.6.1.2 Workers Other Than Blasters

Workers other than blasting operators working in close proximity to abrasive blasting operations shall be protected by utilizing MSHA/NIOSH-approved half-face or full-face air purifying respirators equipped with high-efficiency particulate air (HEPA) filters, eye protection meeting or exceeding ANSI Z87.1 and hearing protectors (ear plugs and/or ear muffs) providing a noise reduction rating of at least 20 dBA or as needed to provide adequate protection.

#### 1.6.2 Cleaning with Compressed Air

Cleaning with compressed air shall be in accordance with Section 20.B.5 of EM 385-1-1 and personnel shall be protected as specified in 29 CFR 1910.134.

#### 1.6.3 Cleaning with Solvents

##### 1.6.3.1 Ventilation

Ventilation shall be provided where required where the concentration of solvent vapors exceeds 10 percent of the Lower Explosive Limit (LEL). Ventilation shall be in accordance with 29 CFR 1910.94, paragraph (c)(5).

##### 1.6.3.2 Personal Protective Equipment

Personal protective equipment shall be provided where required by 29 CFR 1910, Subpart Emergency Equipment

#### 1.6.4 Emergency Equipment

In addition to the requirements of Section 05 of EM 385-1-1, the Contractor shall provide an eyewash in accordance with ANSI Z358.1, paragraph (6).

## 1.6.5 Mixing Vinyl Formulations

### 1.6.5.1 Exhaust Ventilation

Local exhaust ventilation shall be provided in the area where the vinyls are mixed. This ventilation system shall be capable of providing at least 100 linear fpm of capture velocity measured at the point where the curing agent and resin contact during mixing.

### 1.6.5.2 Personal Protective Equipment

Exposure of skin and eyes to epoxy resin components shall be avoided by wearing appropriate chemically resistant gloves, apron, safety goggles, and face shields meeting or exceeding the requirements of ANSI Z87.1.

### 1.6.5.3 Medical Precautions

Individuals who have a history of sensitivity to resin systems shall be medically evaluated before any exposure can occur. Individuals who are medically evaluated as exhibiting a sensitivity to epoxy resins shall not conduct work tasks or otherwise be exposed to such chemicals. Individuals who develop a sensitivity shall be immediately removed from further exposure and medically evaluated.

### 1.6.5.4 Emergency Equipment

A combination unit, comprised of an eyewash and deluge shower, within close proximity to the vinyl mixing operation shall be provided in accordance with ANSI Z358.1, paragraph (9).

## 1.6.6 Paint Application

### 1.6.6.1 Ventilation

When using solvent-based paint in confined spaces, ventilation shall be provided to exchange air in the space at a minimum rate of 5,000 cubic feet per minute per spray gun in operation. Means of egress shall not be blocked. Ventilation shall be continued after completion of painting and through the drying phase of the operation. If the ventilation system fails or the concentration of volatiles exceeds 10 percent of the LEL (except in the zone immediately adjacent to the spray nozzle), painting shall be stopped and spaces evacuated until such time that adequate ventilation is provided. The effectiveness of the ventilation shall be checked by using ventilation smoke tubes and making frequent oxygen and combustible gas readings during painting operations. Exhaust ducts shall discharge clear of the working areas and away from possible sources of ignition.

### 1.6.6.2 Explosion Proof Equipment

Electrical wiring, lights, and other equipment located in the paint spraying area shall be of the explosion proof type designed for operation in Class I, Division 1, Group D, hazardous locations as required by the NFPA 70. Electrical wiring, motors, and other equipment, outside of but within 20 feet of any spraying area, shall not spark and shall conform to the provisions for Class I, Division 2, Group D, hazardous locations. Electric motors used to drive exhaust fans shall not be placed inside spraying areas or ducts. Fan blades and portable air ducts shall be constructed of nonferrous materials. Motors and associated control equipment shall be properly maintained and grounded. The metallic parts of air-

moving devices, spray guns, connecting tubing, and duct work shall be electrically bonded and the bonded assembly shall be grounded.

#### 1.6.6.3 Further Precautions

- a. Workers shall wear nonsparking safety shoes.
- b. Solvent drums taken into the spraying area shall be placed on nonferrous surfaces and shall be grounded. Metallic bonding shall be maintained between containers and drums when materials are being transferred.
- c. Insulation on all power and lighting cables shall be inspected to ensure that the insulation is in excellent working condition and is free of all cracks and worn spots. Cables shall be further inspected to ensure that no connections are within 50 feet of the operation, that lines are not overloaded, and that they are suspended with sufficient slack to prevent undue stress or chafing.

#### 1.6.6.4 Ignition Sources

Ignition sources, to include lighted cigarettes, cigars, pipes, matches, or cigarette lighters shall be prohibited in area of solvent cleaning, paint storage, paint mixing, or paint application.

#### 1.6.7 Health Protection

##### 1.6.7.1 Air Sampling

The Contractor shall perform air sampling and testing as needed to assure that workers are not exposed to contaminants above the permissible exposure limit. In addition, the Contractor shall provide the Contracting Officer with a copy of the test results from the laboratory within five working days of the sampling date and shall provide results from direct-reading instrumentation on the same day the samples are collected.

##### 1.6.7.2 Respirators

During all spray painting operations, spray painters shall use approved SCBA or SAR (air line) respirators, unless valid air sampling has demonstrated contaminant levels to be consistently within concentrations that are compatible with air-purifying respirator Assigned Protection Factor (APF). Persons with facial hair that interferes with the sealing surface of the facepiece to face seal or interferes with respirator valve function shall not be allowed to perform work requiring respiratory protection. Air-purifying chemical cartridge/canister half- or full-facepiece respirators that have a particulate prefilter and are suitable for the specific type(s) of gas/vapor and particulate contaminant(s) may be used for nonconfined space painting, mixing, and cleaning (using solvents). These respirators may be used provided the measured or anticipated concentration of the contaminant(s) in the breathing zone of the exposed worker does not exceed the APF for the respirator and the gas/vapor has good warning properties or the respirator assembly is equipped with a NIOSH-approved end of service life indicator for the gas(es)/vapor anticipated or encountered. Where paint contains toxic elements such as lead, cadmium, chromium, or other toxic particulates that may become airborne during painting in nonconfined spaces, air-purifying half- and full-facepiece respirators or powered air-purifying respirators equipped with appropriate gas vapor cartridges, in combination with a high-efficiency filter, or an appropriate canister incorporating a high-efficiency filter, shall be used.

### 1.6.7.3 Protective Clothing and Equipment

All workers shall wear safety shoes or boots, appropriate gloves to protect against the chemical to be encountered, and breathable, protective, full-body covering during spray-painting applications. Where necessary for emergencies, protective equipment such as life lines, body harnesses, or other means of personnel removal shall be used during confined-space work.

## 1.7 MEDICAL STATUS

Prior to the start of work and annually thereafter, all Contractor employees working with or around paint systems, thinners, blast media, those required to wear respiratory protective equipment, and those who will be exposed to high noise levels shall be medically evaluated for the particular type of exposure they may encounter. Medical records shall be maintained as required by 29 CFR 1910.20. The evaluation shall include:

- a. Audiometric testing and evaluation of employees who will work in a noise environment with a time weighted average greater than or equal to 90 dBA.
- b. Vision screening (employees who use full-facepiece respirators shall not wear contact lenses).
- c. Medical evaluation shall include, but shall not be limited to, the following:
  - (1) Medical history including, but not limited to, alcohol use, with emphasis on liver, kidney, and pulmonary systems, and sensitivity to chemicals to be used on the job.
  - (2) General physical examination with emphasis on liver, kidney, and pulmonary system.
  - (3) Determination of the employee's physical and psychological ability to wear respiratory protective equipment and to perform job-related tasks.
  - (4) Determination of baseline values of biological indices for later comparison to changes associated with exposure to paint systems and thinners or blast media, which include: liver function tests to include SGOT, SGPT, GGPT, alkaline phosphates, bilirubin, complete urinalysis, EKG (employees over age 40), blood urea nitrogen (bun), serum creatinine, pulmonary function test, FVC, and FEV, chest x-ray (if medically indicated), blood lead and ZPP (for individuals where it is known there will be an exposure to materials containing lead), other criteria that may be deemed necessary by the Contractor's physician, and Physician's statements for individual employees that medical status would permit specific task performance.

## 1.8 CHANGE IN MEDICAL STATUS

Any employee whose medical status has changed negatively due to work related chemical and/or physical agent exposure while working with or around paint systems and thinners, blast media, or other chemicals shall be evaluated by a physician, and the Contractor shall obtain a physicians statement as described in paragraph MEDICAL STATUS prior to allowing the employee to return to those work tasks. The Contractor shall notify the Contracting Officer in writing of any negative changes in employee medical status and the results of the physicians reevaluation statement.

## 1.9 ENVIRONMENTAL PROTECTION

Contractor shall comply with the following environmental protection criteria.

### 1.9.1 Waste Classification, Handling, and Disposal

The Contractor shall be responsible for assuring the proper disposal of all hazardous and nonhazardous waste generated during the project. Hazardous waste shall be placed in properly labeled closed containers and shall be shielded adequately to prevent dispersion of the waste by wind or water. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken. Nonhazardous waste shall be stored in closed containers separate from hazardous waste storage areas. All hazardous waste shall be transported by a licensed transporter in accordance with 40 CFR 263 and 49 CFR 171, Subchapter C. All nonhazardous waste shall be transported in accordance with local regulations regarding waste transportation. In addition to the number of manifest copies required by 40 CFR 262.22, one copy of each manifest will be supplied to the Contracting Officer prior to transportation.

### 1.9.2 Containment

The Contractor shall contain debris generated during paint removal operations in accordance with the requirements of SSPC Guide 6, Class 3A. Where required the containment air pressure shall be verified visually. Where required the minimum air movement velocity shall be 100 fpm for cross-draft ventilation or 60 fpm for downdraft ventilation.

### 1.9.3 Visible Emissions Monitoring

The time of emissions shall be measured in accordance with 40 CFR 60, App A, Mtd 22. Visible emissions shall be monitored for not less than 15 minutes of every hour. Visible emissions for each hour shall be calculated by extrapolation. In no case shall visible emissions extend greater than 150 feet in any direction horizontal from the containment. In no case shall visible emissions be observed in the area of any sensitive receptor. If such emissions occur the job shall be shut down immediately and corrective action taken. The foreman shall be notified whenever visible emissions exceed 200 seconds in a 1 hour period. The foreman shall be notified and the job shall be shut down and corrective action taken whenever visible emissions exceed 300 seconds in a 2 hour period. Total observed visible emissions from the containment shall not exceed 5 percent of the work day. Shutdown and corrective action shall be taken by the Contractor to prevent such an occurrence. The Contractor shall document each time that the work is halted due to a violation of the visible emissions criteria. Documentation shall include the cause for shutdown and the corrective action taken to resolve the problem.

### 1.9.4 Air Quality Monitoring

#### 1.9.4.1 PM-10 Monitoring

The Contractor shall perform PM-10 monitoring. The positioning of air monitoring equipment shall be in accordance with 40 CFR 58, App E, Subpart (8). In addition, a minimum of two PM-10 monitors shall be used at the project site, one down wind from the project and one in the area of greatest public access (e.g., playground, school yard, or homeowner's yard). When the project is in an area where there are critical receptors nearby, monitoring shall be conducted throughout the entire period that abrasive blasting and cleanup operations are performed. Otherwise, monitoring shall be performed 4 of the first 8 days and on a regular basis thereafter for a sum total of 25 percent of the time surface

preparation and debris cleanup are performed. Failure to meet air quality regulatory limits shall require air monitoring to be repeated immediately after corrective actions have been taken. The Contractor shall also conduct preproject PM-10 monitoring. The preproject PM-10 monitoring shall be conducted a minimum of 2 weeks prior to the beginning of the project. The monitoring shall continue for a minimum of 3 days to establish background levels. A report of the results shall be submitted to the Contracting Officer within 48 hours and shall include:

- (1) Name and location of jobsite.
- (2) Date of monitoring.
- (3) Time of monitoring (i.e., time monitoring begins and ends each day).
- (4) Identification and serial number of monitoring units.
- (5) Drawing showing specific location of monitoring units.
- (6) Drawing showing specific location of paint removal operation and the method of removal or work activity being performed.
- (7) Wind direction and velocity.
- (8) A flow chart verifying the rate of air flow across the filter throughout the sampling period.
- (9) Name and address of laboratory.
- (10) Laboratory test procedure.
- (11) Laboratory test results.
- (12) Signatures of field and laboratory technicians conducting the work.

#### 1.9.4.2 TSP Monitoring

The Contractor shall perform TSP monitoring. The positioning of air monitoring equipment shall be in accordance with 40 CFR 58, App E, Subpart (8). In addition, a minimum of two TSP monitors shall be used at the project site, one down wind from the project and one in the area of greatest public access (e.g. playground, school yard, or homeowner's yard). Otherwise, monitoring shall be performed 4 of the first 8 days and on a regular basis thereafter for a sum total of 25 percent of the time surface preparation and debris cleanup are performed. Failure to meet air quality regulatory limits shall require air monitoring to be repeated immediately after corrective actions have been taken. The Contractor shall also conduct preproject TSP monitoring. The preproject TSP monitoring shall be conducted a minimum of 2 weeks prior to the beginning of the project. The monitoring shall continue for a minimum of 3 days to establish background levels. A report of the results shall be submitted to the Contracting Officer within 48 hours and shall include:

- (1) Name and location of jobsite.
- (2) Date of monitoring.

- (3) Time of monitoring (i.e., time monitoring begins and ends each day).
- (4) Identification and serial number of monitoring units.
- (5) Drawing showing specific location of monitoring units.
- (6) Drawing showing specific location of paint removal operation and the method of removal or work activity being performed.
- (7) Wind direction and velocity.
- (8) A flow chart verifying the rate of air flow across the filter throughout the sampling period.
- (9) Name and address of laboratory.
- (10) Laboratory test procedure.
- (11) Laboratory test results.
- (12) Signatures of field and laboratory technicians conducting the work.

#### 1.9.5 Soil Quality

The Contractor shall establish and implement practices and procedures for preventing contamination of the soil from the removal paints.

#### 1.10 PAINT PACKAGING, DELIVERY, AND STORAGE

Paints shall be processed and packaged to ensure that within a period of one year from date of manufacture, they will not gel, liver, or thicken deleteriously, or form gas in the closed container. Paints, unless otherwise specified or permitted, shall be packaged in standard containers not larger than 5 gallons, with removable friction or lug-type covers. Containers for vinyl-type paints shall be lined with a coating resistant to solvents in the formulations and capable of effectively isolating the paint from contact with the metal container. Each container of paint or separately packaged component thereof shall be labeled to indicate the purchaser's order number, date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name, and formula or specification number of the paint together with special labeling instructions, when specified. Paint shall be delivered to the job in unbroken containers. Paints that can be harmed by exposure to cold weather shall be stored in ventilated, heated shelters. All paints shall be stored under cover from the elements and in locations free from sparks and flames.

### PART 2 PRODUCTS

#### 2.1 SPECIAL PAINT FORMULAS

Special paints shall have the composition as indicated in the formulas listed herein. Where so specified, certain components of a paint formulation shall be packaged in separate containers for

mixing on the job. If not specified or otherwise prescribed, the color shall be that naturally obtained from the required pigmentation.

## 2.2 PAINT FORMULATIONS

Special paint formulas shall comply with the following:

### 2.2.1 Formula V-102e, Vinyl-Type Ready-Mixed Aluminum Impacted Immersion Coating

<u>INGREDIENTS</u>	<u>PERCENT BY MASS</u>
Vinyl Resin, Type 3	18.2
Aluminum Powder	8.3
Diisodecyl Phthalate	3.1
Methyl Isobutyl Ketone	33.8
Toluene	<u>36.6</u>
	100.0

- a. The paint shall be furnished with the aluminum pigment mixed into the vehicle.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.

### 2.2.2 Formula V-766e, Vinyl-Type White (or Gray) Impacted Immersion Coating

<u>INGREDIENTS</u>	<u>PERCENT BY MASS</u>
Vinyl Resin, Type 3	5.6
Vinyl Resin, Type 4	11.6
Titanium Dioxide and (for Gray)	
Carbon Black	13.0
Diisodecyl Phthalate	2.9
Methyl Isobutyl Ketone	32.0
Toluene	34.7
Ortho-Phosphoric Acid	<u>0.2</u>
	100.0

- a. The dispersion of pigment shall be accomplished by means of pebble mills or other approved methods to produce a fineness of grind (ASTM D 1210) of not less than 7 on the Hegman scale. Grinding in steel-lined or steel-ball mills will not be permitted. No grinding aids, antissettling agents, or any other materials except those shown in the formula will be permitted. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods. The ortho-phosphoric acid shall be measured accurately and diluted with at least four parts of ketone to one part of acid and it shall be slowly incorporated into the finished paint with constant and thorough agitation.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.
- c. The white and gray paints shall be furnished in the volume ratio designated by the purchaser. The gray paint shall contain no pigments other than those specified. Enough carbon black shall

be included to produce a dry paint film having a reflectance of 20-24 (ASTM E 1347). The resulting gray color shall approximate color 26231 of FED-STD-595.

### 2.2.3 Formula VZ-108d, Vinyl-Type Zinc-Rich Impacted Immersion Coating

INGREDIENTS	PERCENT BY WEIGHT	POUNDS	GALLONS
COMPONENT A			
Vinyl Resin, Type 3	16.6	109.2	9.65
Methyl Isobutyl Ketone	80.6	528.9	79.30
Suspending Agent E	0.7	4.6	0.28
Suspending Agent F	0.4	2.7	0.19
Methanol	0.5	3.3	0.50
Synthetic Iron Oxide (Red)	<u>1.2</u>	<u>7.9</u>	<u>0.19</u>
	100.0	656.6	90.11
COMPONENT B			
Silane B	100.0	4.1	0.47
COMPONENT C			
Zinc Dust	<u>100.0</u>	550.0	9.42
	100.00		
	(mixed paint)		

a. The iron oxide and suspending agents shall be dispersed into the vehicle (Component A) to a fineness of grind of not less than 4 on the Hegman scale (ASTM D 1210). Grinding in steel-lined containers or using steel-grinding media shall not be permitted. The sole purpose of the iron oxide pigment is to produce a contrasting color. A red iron oxide-type 3 vinyl resin vehicle paste may be used in place of dry iron oxide provided compensating adjustment are made in the additions of Type 3 resin and methyl isobutyl ketone. The finished product with zinc dust added shall produce a paint which has a red tone upon drying and a reflectance of not more than 16 (ASTM E 1347).

b. VZ-108d paint shall be supplied as a kit. Each kit shall consist of 4.5 gallons (33.1 pounds) of Component A in a 5-gallon lug closure type pail, 27.5 pounds of zinc dust (Component C) packaged in a 1-gallon plastic pail, and 3 fluid ounces of silane (Component B) packaged in a glass bottle of suitable size having a polyethylene lined cap. The bottle of silane shall be placed on the zinc dust in the 1-gallon pail. In addition to standard labeling requirements, each container of each component shall be properly identified as to component type and each container label of Component A shall carry the following: MIXING AND APPLICATION INSTRUCTIONS: WARNING - THIS PAINT WILL NOT ADHERE TO STEEL SURFACES UNLESS COMPONENT B IS ADDED. Remove the 3 ounces of bottled Component B (silane) from the Component C (zinc dust) container and add to the base paint Component A) with thorough stirring. Then sift the zinc dust into the base paint while it is being vigorously agitated with a power-driven stirrer and continue the stirring until the zinc dust has been dispersed. The mixed paint shall at some point be strained through a 30-60 mesh screen to prevent zinc dust slugs from

reaching the spray gun nozzle. The paint shall be stirred continuously during application at a rate that will prevent settling. If spraying is interrupted for longer than 15 minutes, the entire length of the hose shall be whipped vigorously to redisperse the zinc. If the spraying is to be interrupted for more than 1 hour, the hose shall be emptied by blowing the paint back into the paint pot. Thinning will not normally be required when ambient temperatures are below about 80 degrees F, but when the ambient and steel temperatures are higher, methyl isoamyl ketone (MIAK) or methyl isobutyl ketone (MIBK) should be used. If paint is kept covered at all times, its pot life will be about 8 days.

## 2.3 INGREDIENTS FOR SPECIAL PAINT FORMULAS

The following ingredient materials and thinners apply only to those special paints whose formulas are shown above in detail.

### 2.3.1 Pigments and Suspending Agents

#### 2.3.1.1 Aluminum Powder

For vinyl paint aluminum powder shall conform to ASTM D 962, Type 1, Class B.

#### 2.3.1.2 Carbon Black

Carbon black shall conform to ASTM D 561, Type I or II.

#### 2.3.1.3 Zinc Dust

Zinc dust pigment shall conform to ASTM D 520, Type II.

#### 2.3.1.4 Iron Oxide

Iron oxide, (Dry) synthetic (red), shall conform to ASTM D 3721. In addition, the pigment shall have a maximum oil absorption of 24 and a specific gravity of 4.90 to 5.20 when tested in accordance with ASTM D 281 and ASTM D 153, Method A, respectively. When the pigment is dispersed into specified vinyl paint formulation, the paint shall have color approximating FED-STD-595 color 10076 (dark red paint), and shall show no evidence of incompatibility or reaction between pigment and other components after 6 months storage.

#### 2.3.1.5 Titanium Dioxide

Titanium dioxide in vinyl paint Formula V-766e shall be one of the following: Kronos 2160 or 2101, Kronos, Inc.; Ti-Pure 960, E.I. Dupont DeNemours and Co., Inc.

#### 2.3.1.6 Suspending Agent E

Suspending Agent E shall be a light cream colored finely divided powder having a specific gravity of 2 to 2.3. It shall be an organic derivative of magnesium aluminum silicate mineral capable of minimizing the tendency of zinc dust to settle hard without increasing the viscosity of the paint appreciably. MPA-14, produced by RHEOX, Inc., has these properties.

### 2.3.1.7 Suspending Agent F

Suspending Agent F shall be a light cream colored finely divided powder having a specific gravity of approximately 1.8. It shall be an organic derivative of a special montmorillonite (trialkylaryl ammonium hectorite). Bentone 27, produced by RHEOX, Inc., has these properties.

### 2.3.2 Resins, Plasticizer, and Catalyst

#### 2.3.2.1 Diisodecyl Phthalate

Diisodecyl Phthalate shall have a purity of not less than 99.0 percent, shall contain not more than 0.1 percent water, and shall have an acid number (ASTM D 1045) of not more than 0.10.

#### 2.3.2.2 Vinyl Resin, Type 3

Vinyl resin, Type 3, shall be a vinyl chloride-acetate copolymer of medium average molecular weight produced by a solution polymerization process and shall contain 85 to 88 percent vinyl chloride and 12 to 15 percent vinyl acetate by weight. The resin shall have film-forming properties and shall, in specified formulations, produce results equal to Vinylite resin VYHH, as manufactured by the Union Carbide Corporation.

#### 2.3.2.3 Vinyl Resin, Type 4

Vinyl resin, Type 4, shall be a copolymer of the vinyl chloride-acetate type produced by a solution polymerization process, shall contain (by weight) 1 percent interpolymerized dibasic acid, 84 to 87 percent vinyl chloride, and 12 to 15 percent vinyl acetate. The resin shall have film-forming properties and shall, in the specified formulations, produce results equal to Vinylite resin VMCH, as manufactured by the Union Carbide Corporation.

#### 2.3.2.4 Ortho-phosphoric Acid

Ortho-phosphoric acid shall be a chemically pure 85-percent grade.

### 2.3.3 Solvent and Thinners

#### 2.3.3.1 Methanol

Methanol (methyl alcohol) shall conform to ASTM D 1152.

#### 2.3.3.2 Methyl Ethyl Ketone

Methyl ethyl ketone (MEK) shall conform to ASTM D 740.

#### 2.3.3.3 Methyl Isobutyl Ketone

Methyl isobutyl ketone (MIBK) shall conform to ASTM D 1153.

#### 2.3.3.4 Methyl Isoamyl Ketone

Methyl isoamyl ketone (MIAK) shall conform to ASTM D 2917.

### 2.3.3.5 Toluene

Toluene shall conform to ASTM D 841.

### 2.3.4 Silane B

Silane B for Formula VZ-108d shall be N-beta-(aminoethyl)-gamma-aminopropyltrimethoxy silane. Silane A-1120, produced by the C.K. Witco Corporation, and Silane Z-6020, produced by Dow Corning Corporation, are products of this type.

## 2.4 TESTING

### 2.4.1 Chromatographic Analysis

Solvents in vinyl paints and thinners shall be subject to analysis by programmed temperature gas chromatographic methods and/or spectrophotometric methods, employing the same techniques that give reproducible results on prepared control samples known to meet the specifications. If the solvent being analyzed is of the type consisting primarily of a single chemical compound or a mixture of two or more such solvents, interpretation of the test results shall take cognizance of the degree of purity of the individual solvents as commercially produced for the paint industry.

### 2.4.2 Vinyl Paints

Vinyl paints shall be subject to the following adhesion test. When V-766 formulations are tested, 5 to 7 mils (dry) shall be spray applied to mild steel panels. The steel panels shall be essentially free of oil or other contaminants that may interfere with coating adhesion. The test panels shall be dry blast cleaned to a White Metal grade which shall be in compliance with SSPC SP 5. The surface shall have an angular profile of 2.0 to 2.5 mils as measured by ASTM D 4417, Method C. When V-102 formulations are tested, they shall be spray applied over 1.5 to 2.5 mils (dry) of V-766 known to pass this test. When VZ-108 is tested, the coating shall be mixed in its proper proportions and then spray applied to a dry film thickness of 1.5 to 2.5 mils above the blast profile. The VZ-108 shall be top coated with a V-766 known to pass this test. In all cases, the complete system shall have a total dry film thickness of 5 to 7 mils above the blast profile. After being air dried for 2 hours at room temperature, the panel shall be dried in a vertical position for 16 hours at 120 degrees F. After cooling for 1 hour, the panel shall be immersed in tap water at 85 to 90 degrees F for 48 to 72 hours. Immediately upon removal, the panel shall be dried with soft cloth and examined for adhesion as follows: With a pocket knife or other suitable instrument, two parallel cuts at least 1 inch long shall be made 1/4 to 3/8 inch apart through the paint film to the steel surface. A third cut shall be made perpendicular to and passing through the end of the first two. With the tip of the knife blade, the film shall be loosened from the panel from the third cut between the parallel cuts for a distance of 1/8 to 1/4 inch. With the panel being held horizontally, the free end of the paint film shall be grasped between the thumb and forefinger and pulled vertically in an attempt to remove the film as a strip from between the first two cuts. The strip of paint film shall be removed at a rate of approximately 1/10 inch per second and shall be maintained in a vertical position during the process of removal. The adhesion is acceptable if the strip of paint breaks when pulled or if the strip elongates a minimum of 10 percent during its removal. Paints not intended to be self-priming shall exhibit no delamination from the primer.

## PART 3 EXECUTION

### 3.1 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

#### 3.1.1 General Requirements

Surfaces to be painted shall be cleaned before applying paint or surface treatments. Deposits of grease or oil shall be removed in accordance with SSPC SP 1, prior to mechanical cleaning. Solvent cleaning shall be accomplished with mineral spirits or other low toxicity solvents having a flash point above 100 degrees F. Clean cloths and clean fluids shall be used to avoid leaving a thin film of greasy residue on the surfaces being cleaned. Items not to be prepared or coated shall be protected from damage by the surface preparation methods. Machinery shall be protected against entry of blast abrasive and dust into working parts. Cleaning and painting shall be so programmed that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces, and surfaces not intended to be painted shall be suitably protected from the effects of cleaning and painting operations. Welding of, or in the vicinity of, previously painted surfaces shall be conducted in a manner to prevent weld spatter from striking the paint and to otherwise reduce coating damage to a minimum; paint damaged by welding operations shall be restored to original condition. Surfaces to be painted that will be inaccessible after construction, erection, or installation operations are completed shall be painted before they become inaccessible.

#### 3.1.2 Ferrous Surfaces Subject to Severe Exposure

Ferrous surfaces subject to extended periods of immersion or as otherwise required shall be dry blast-cleaned to SSPC SP-5. The blast profile, unless otherwise specified, shall be 1.5 to 2.5 mils as measured by ASTM D 4417, Method C. Appropriate abrasive blast media shall be used to produce the desired surface profile and to give an angular anchor tooth pattern. If recycled blast media is used, an appropriate particle size distribution shall be maintained so that the specified profile is consistently obtained. Steel shot or other abrasives that do not produce an angular profile shall not be used. Weld spatter not dislodged by blasting shall be removed with impact or grinding tools and the areas reblasted prior to painting. Surfaces shall be dry at the time of blasting. Blast cleaning to SSPC SP 5 shall be done in the field and, unless otherwise specifically authorized, after final erection. Within 8 hours after cleaning, prior to the deposition of any detectable moisture, contaminants, or corrosion, all ferrous surfaces blast cleaned to SSPC SP 5 shall be cleaned of dust and abrasive particles by brush, vacuum cleaner, and/or blown down with clean, dry, compressed air, and given the first coat of paint. Upon written request by the Contractor, the Contracting Officer may authorize mill or shop cleaning of assembled or partially assembled components specified to receive one of the vinyl-type paint systems or Systems Nos. 6-A-Z and 21-A-Z employing the epoxy zinc-rich primer. The surfaces, if shop blasted, shall be shop coated with the first and second coats of the specified paint system except that the epoxy zinc-rich primed surfaces shall receive an extra single spray coat of the zinc primer at the time field painting is started, as specified in the paint system instructions. The shop coating shall be maintained in good condition by cleaning and touching up of areas damaged during the construction period. If pinpoint or general rusting appears, surfaces shall be reblasted and repainted at no added cost to the Government. Prior to the field application of subsequent coats, soiled areas of the shop coating shall be thoroughly cleaned and all welds or other unpainted or damaged areas shall be cleaned and coated in a manner to make them equivalent to adjacent, undamaged paint surfaces.

### 3.1.3 Damp and Wet Ferrous Metal Surfaces

Ferrous surfaces that are wet with condensation or standing or running water, shall be blast-cleaned to SSPC SP 5. The blast profile, unless otherwise specified, shall be 1.5 to 3.0 mils as measured by ASTM D 4417, Method C. Appropriate abrasive blast media shall be used to produce the desired surface profile and to give an angular anchor tooth pattern. Steel grit or shot media shall not be used. Weld spatter not dislodged by blasting shall be removed with impact or grinding tools and the areas reblasted prior to painting. Surfaces shall be as dry as possible at the time of blasting. Immediately after cleaning and prior to the formation of extensive corrosion products, all ferrous surfaces blast cleaned to SSPC SP 5 shall be cleaned of residual abrasive particles, and given the first coat of paint. A slightly visible rust bloom shall be permitted on surfaces to be painted.

## 3.2 PAINT APPLICATION

### 3.2.1 General

The finished coating shall be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Application of initial or subsequent coatings shall not commence until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are satisfactory. Each paint coat shall be applied in a manner that will produce an even, continuous film of uniform thickness. Edges, corners, crevices, seams, joints, welds, rivets, corrosion pits, and other surface irregularities shall receive special attention to ensure that they receive an adequate thickness of paint. Spray equipment shall be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles shall be as recommended by the spray equipment manufacturer for the material being applied. Airless-type spray equipment may be used only on broad, flat, or otherwise simply configured surfaces, except that it may be employed for general painting if the spray gun is equipped with dual or adjustable tips of proper types and orifice sizes. Airless-type equipment shall not be used for the application of vinyl paints.

### 3.2.2 Mixing and Thinning

Paints shall be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Paste or dry-powder pigments specified to be added at the time of use shall, with the aid of powered stirrers, be incorporated into the vehicle or base paint in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned immediately prior to use. Thinning shall generally be limited to the addition of not more than 1 pint per gallon of the proper thinner; this general limitation shall not apply when more specific thinning instructions are provided. Paint that has been stored at low temperature, shall be brought up to at least 70 degrees F before being mixed and thinned, and its temperature in the spray tank or other working container shall not fall below 60 degrees F during the application. Paint that has deteriorated in any manner to a degree that it cannot be restored to essentially its original condition by customary field-mixing methods shall not be used and shall be removed from the project site. Paint and thinner that is more than 1 year old shall be resampled and resubmitted for testing to determine its suitability for application.

### 3.2.3 Atmospheric and Surface Conditions

Paint shall be applied only to surfaces that are above the dew point temperature and that are completely free of moisture as determined by sight and touch. Paint shall not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, the temperature of the surfaces to be painted and of air in contact therewith shall be not less than 45 degrees F during paint application nor shall paint be applied if the surfaces can be expected to drop to 32 degrees F or lower before the film has dried to a reasonably firm condition. During periods of inclement weather, painting may be continued by enclosing the surfaces and applying artificial heat, provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. Paint shall not be applied to surfaces heated by direct sunlight or other sources to temperatures that will cause detrimental blistering, pinholing, or porosity of the film.

### 3.2.4 Time Between Surface Preparation and Painting

Surfaces that have been cleaned and/or otherwise prepared for painting shall be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

### 3.2.5 Method of Paint Application

Unless otherwise specified, paint shall be applied by brush or spray to ferrous and nonferrous metal surfaces. Special attention shall be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Other methods of application to metal surfaces shall be subject to the specific approval of the Contracting Officer. Paint on plaster, concrete, or other nonmetallic surfaces shall be applied by brush, roller, and/or spray.

### 3.2.6 Coverage and Film Thickness

Film thickness or spreading rates shall be as specified hereinafter. Where no spreading rate is specified, the paint shall be applied at a rate normal for the type of material being used. In any event, the combined coats of a specified paint system shall completely hide base surface and the finish coats shall completely hide undercoats of dissimilar color.

#### 3.2.6.1 Measurement on Ferrous Metal

Where dry film thickness requirements are specified for coatings on ferrous surfaces, measurements shall be made with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D 1186. They shall be calibrated using plastic shims with metal practically identical in composition and surface preparation to that being coated, and of substantially the same thickness (except that for measurements on metal thicker than 1/4 inch, the instrument may be calibrated on metal with a minimum thickness of 1/4 inch). Frequency of measurements shall be as recommended for field measurements by ASTM D 1186 and reported as the mean for each spot determination. The instruments shall be calibrated or calibration verified prior to, during, and after each use.

### 3.2.7 Progress of Painting Work

Where field painting on any type of surface has commenced, the complete painting operation, including priming and finishing coats, on that portion of the work shall be completed as soon as practicable, without prolonged delays. Sufficient time shall elapse between successive coats to permit them to dry properly for recoating, and this period shall be modified as necessary to suit adverse weather conditions. Paint shall be considered dry for recoating when it feels firm, does not deform or feel sticky under moderate pressure of the finger, and the application of another coat of paint does not cause film irregularities such as lifting or loss of adhesion of the undercoat. All coats of all painted surfaces shall be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, undercoats shall be cleaned of dust, grease, overspray, or foreign matter by means of airblast, solvent cleaning, or other suitable means. Cement and mortar deposits on painted steel surfaces, not satisfactorily removed by ordinary cleaning methods, shall be brush-off blast cleaned and completely repainted as required. Undercoats of high gloss shall, if necessary for establishment of good adhesion, be scuff sanded, solvent wiped, or otherwise treated prior to application of a succeeding coat. Field coats on metal shall be applied after erection except as otherwise specified and except for surfaces to be painted that will become inaccessible after erection.

### 3.2.8 Contacting Surfaces

When riveted or ordinary bolted contact is to exist between surfaces of ferrous or other metal parts of substantially similar chemical composition, such surfaces will not be required to be painted, but any resulting crevices shall subsequently be filled or sealed with paint. Contacting metal surfaces formed by high-strength bolts in friction-type connections shall not be painted. Where a nonmetal surface is to be in riveted or bolted contact with a metal surface, the contacting surfaces of the metal shall be cleaned and given three coats of the specified primer. Unless otherwise specified, corrosion-resisting metal surfaces, including cladding therewith, shall not be painted. Note bottom of base plate shall be painted.

### 3.2.9 Drying Time Prior to Immersion

Minimum drying periods after final coat prior to immersion shall be: vinyl-type paint systems at least 3 days. Minimum drying periods shall be increased twofold if the drying temperature is below 65 degrees F and/or if the immersion exposure involves considerable abrasion.

### 3.2.10 Protection of Painted Surfaces

Where shelter and/or heat are provided for painted surfaces during inclement weather, such protective measures shall be maintained until the paint film has dried and discontinuance of the measures is authorized. Items that have been painted shall not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. All metalwork coated in the shop or field prior to final erection shall be stored out of contact with the ground in a manner and location that will minimize the formation of water-holding pockets; soiling, contamination, and deterioration of the paint film, and damaged areas of paint on such metalwork shall be cleaned and touched up without delay. The first field coat of paint shall be applied within a reasonable period of time after the shop coat and in any event before weathering of the shop coat becomes extensive.

### 3.2.11 Vinyl Paints

#### 3.2.11.1 General

Vinyl paints shall be spray applied, except that areas inaccessible to spraying shall be brushed. All of the vinyl paints require thinning for spray application except the zinc-rich vinyl paint (Formula VZ 108d) which will normally require thinning only under certain weather conditions. Thinners for vinyl paints shall be as follows:

APPROXIMATE AMBIENT AIR TEMPERATURE (Degrees F )Below 50

MEK 50 - 70

MIBK Above 70

The amount of thinner shall be varied to provide a wet spray and avoid deposition of particles that are semidry when they strike the surface. Vinyl paints shall not be applied when the temperature of the ambient air and receiving surfaces is less than 35 degrees F nor when the receiving surfaces are higher than 125 degrees F. Each spray coat of vinyl paint shall consist of a preliminary extra spray pass on edges, corners, interior angles, pits, seams, crevices, junctions of joining members, rivets, weld lines, and similar surface irregularities followed by an overall double spray coat. A double spray coat of vinyl-type paint shall consist of applying paint to a working area of not less than several hundred square feet (meters) in a single, half-lapped pass, followed after drying to at least a near tack-free condition by another spray pass applied at the same coverage rate and where practicable at right angles to the first. Rivets, bolts, and similar surface projections shall receive sprayed paint from every direction to ensure complete coverage of all faces. Pits, cracks, and crevices shall be filled with paint insofar as practicable, but in any event, all pit surfaces shall be thoroughly covered and all cracks and crevices shall be sealed off against the entrance of moisture. Fluid and atomization pressures shall be kept as low as practicable consistent with good spraying results. Unless otherwise specified, not more than 2.0 mils, average dry film thickness, of vinyl paint shall be applied per double spray coat. Except where otherwise indicated, an undercoat of the vinyl-type paint may receive the next coat any time after the undercoat is tack-free and firm to the touch, provided that no speedup or delay in the recoating schedule shall cause film defects such as sags, runs, air bubbles, air craters, or poor intercoat adhesion. Neither the prime coat nor any other coat shall be walked upon or be subjected to any other abrading action until it has hardened sufficiently to resist mechanical damage.

#### 3.2.11.2 Vinyl Zinc-Rich Primer

Primer shall be field mixed combining components A, B, and C. Mixing shall be in accordance with label instructions. After mixing, the paint shall be kept covered at all times to avoid contamination and shall be applied within 8 days after it is mixed. When the ambient and/or steel temperature is below about 80 degrees F, the paint will not normally require thinning; however, the paint shall at all times contain sufficient volatiles (thinners) to permit it to be satisfactorily atomized and to provide a wet spray and to avoid deposition of particles that are semidry when they reach the surface. The paint shall be stirred continuously during application at a rate that will prevent the zinc dust from settling. When spraying is resumed after any interruption of longer than 15 minutes, the entire length of the material hose shall be whipped vigorously until any settled zinc is redispersed. Long periods of permitting the paint to remain stagnant in the hose shall be avoided by emptying the hoses whenever the painting operation is to be suspended for more than 1 hour. The material (paint) hoses shall be kept as short as practicable, preferably not more than 50 feet in length. Equipment used for spraying this zinc primer shall not be used for spraying other vinyl-type paints without first being thoroughly cleaned, since many of the other paints will not tolerate zinc contamination; no type of hot spray shall be used. An

average dry film thickness of up to 2.5 mils may be applied in one double-spray coat. Unless specifically authorized, not more than 8 days shall elapse after application of a VZ-108d zinc-rich coat before it receives a succeeding coat.

### 3.2.11.3 Vinyl Paints

Vinyl Paints (Formulas V-102e, and V-766e) are ready-mixed paints designed to be spray applied over a wide range of ambient temperatures by field thinning with the proper type and amount of thinner. For spray application, they shall be thinned as necessary up to approximately 25 percent (1 quart per gallon of base paint) with the appropriate thinner; when ambient and steel temperatures are above normal, up to 40-percent thinning may be necessary for satisfactory application.

## 3.3 PAINT SYSTEMS APPLICATION

The required paint systems and the surfaces to which they shall be applied are shown in this paragraph, and/or in the drawings. Supplementary information follows.

### 3.3.1 Surface Preparation

The method of surface preparation and pretreatment shown in the tabulation of paint systems is for identification purposes only. Cleaning and pretreatment of surfaces prior to painting shall be accomplished in accordance with detailed requirements previously described.

### 3.3.2 System No. 3-A-Z

Paint shall be spray applied to an average dry film thickness of a minimum of 6.5 mils for the completed system, and the thickness at any point shall not be less than 5.5 mils. The dry film thickness of the zinc-rich coat shall be approximately 2.5 mils. Specified film thickness, including the prescribed total, shall be attained in any event, and any extra coats needed to attain specified thickness shall be applied at no additional cost to the Government. Attaining of the specified film thickness in fewer than the prescribed number of coats or spray passes will be acceptable provided heavier applications do not cause an increase in pinholes, bubbles, blisters, or voids in the dried film and also provided that not more than 2.0 mils (dry film thickness) per double spray coat nor more than 1.0 mil per single spray pass of nonzinc paint shall be applied at one time.

### 3.3.3 Protection of Nonpainted Items and Cleanup

Walls, equipment, fixtures and all other items in the vicinity of the surfaces being painted shall be maintained free from damage by paint or painting activities. Paint spillage and painting activity damage shall be promptly repaired.

## 3.4 INSPECTION

The Contractor shall inspect, document, and report all work phases and operations on a daily basis. As a minimum the daily report shall contain the following:

- a. Inspections performed, including the area of the structure involved and the results of the inspection.

- b. Surface preparation operations performed, including the area of the structure involved, the mode of preparation, the kinds of solvent, abrasive, or power tools employed, and whether contract requirements were met.
- c. Thinning operations performed, including thinners used, batch numbers, and thinner/paint volume ratios.
- d. Application operations performed, including the area of the structure involved, mode of application employed, ambient temperature, substrate temperature, dew point, relative humidity, type of paint with batch numbers, elapsed time between surface preparation and application, elapsed time for recoat, condition of underlying coat, number of coats applied, and if specified, measured dry film thickness or spreading rate of each new coating.

### 3.5 PAINTING SCHEDULES

#### SYSTEM NO. 3-A-Z

Items or surfaces to be coated: To include 6 each cylinders, 4 each Rod Extension Tube Sections and 3 each Bonnet Covers

<u>SURFACE PREPARATION</u>	<u>1st COAT</u>	<u>2nd COAT</u>	<u>3rd COAT</u>	<u>4th COAT</u>
SSPC SP 5 White Metal blast Cleaning	Vinyl zinc- rich VZ-108d (double spray coat)	White Vinyl V-766e (double spray coat)	Aluminum Vinyl V-102e (double spray coat)	Aluminum Vinyl V-102e as needed to obtain the required thickness)

END OF SECTION

SECTION 15010

POSITION INDICATING SYSTEM FOR HYDRAULIC GATES

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 NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C80.1 (1995) Rigid Steel Conduit - Zinc Coated

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 1 (1993) Industrial Control and Systems

NEMA ICS 2 (1993) Industrial Controls and Systems Controllers, Contactors, and Overload Relays Rated Not More Than 2,000 Volts AC or 750 Volts DC

NEMA ICS 6 (1993) Industrial Control and Systems, Enclosures

NEMA MG 1 (1998) Motors and Generators

NEMA RN 1 (1998) Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit

UNDERWRITERS LABORATORIES (UL)

UL 50 (1995; Rev thru Nov 1999) Enclosures for Electrical Equipment

UL 6 (1997) Rigid Metal Conduit

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL OF CONTRACT DATA:

Shop Drawings

Schematic and Drawings; G-RE

Submit schematic and drawings as specified.

## Product Data

Materials and Mechanical Equipment; G-RE  
Electrical Equipment; G-RE

Submit manufacturer's catalog data and descriptive literature for all standard equipment and products to be incorporated in the work, including all materials and equipment specified in paragraphs MATERIALS AND MECHANICAL EQUIPMENT and ELECTRICAL EQUIPMENT. This data shall include specifications and assembly drawings showing sizes, ratings, parts and material lists, overall dimensions, and mounting dimensions.

System Description; G-RE  
Design and Performance Requirements; G-RE  
Field Testing; G-RE

Submit procedures for field testing as specified in paragraph FIELD TESTING. Submit his proposed testing program at least 4 weeks prior to the first scheduled test to ensure agreement as to personnel required and scope of the testing program.

## Test Reports

Field Tests; G-RE

Submit operational test reports for testing of the equipment after installation.

## Operation and Maintenance Data

Operation and Maintenance; G-RE

Submit operation and maintenance requirement as specified.

## 1.3 SYSTEM DESCRIPTION

The work covered by this section of the specifications consists of detailed requirements for the fabrication, shop assembly, testing, delivery, and installation of the position indicating control system which operate and monitor the emergency gate position as specified and as shown.

## 1.4 DESIGN AND PERFORMANCE REQUIREMENTS

### 1.4.1 General

The contract drawings indicate the general arrangement of the hydraulic power system for operation of the emergency gates, clearances necessitated by the structure or other equipment, maximum overall dimensions, and other pertinent features.

### 1.4.2 Design Parameters

The principal design parameters for the position indicating system are as follows:

- a. Digital displays to read or be blocked of to tenths of a foot.

b. Controller at redundant power unit shall produce a digital indication of the movement of the cylinders up and down.

c. All devices installed below maximum flood pool shall be immersible to 150 psi.

## 1.5 DELIVERY, STORAGE, AND HANDLING

### 1.5.1 Packaging

The subassemblies shall be defined as the following:

#### a. Control consoles

The subassemblies shall be provided with adequate protective pads, supports, and blocking and shall be securely restrained to prevent distortion or damage to the painted surfaces in transit. Any loss or damage during shipment, including damage to the painted surfaces, will be considered the responsibility of the Contractor, and shall be replaced or repaired without cost to the Government. All accessories and spare parts shall be packed separately in containers plainly marked "ACCESSORIES ONLY," or "SPARE PARTS ONLY." A packing list, listing the contents of each container, shall be placed in a moisture-proof envelope and securely fastened to the outside of the container. Standard commercial packaging in accordance with ASTM D 3951 will be acceptable except where a different method or standard of packaging is specified.

### 1.5.2 Shipping, Preservation, and Storage

Packing, crating, cradles, etc., necessary to ensure safe shipment are the responsibility of the Contractor and shall become the property of the Government upon delivery of the equipment. Equipment delivered and placed in storage shall be stored with protection from the weather, humidity, temperature variation, dirt and dust, or other contaminants.

## 1.6 PROJECT/SITE CONDITIONS

The Contractor shall visit the site to thoroughly familiarize himself with all details of the work and working conditions, to verify dimensions in the field, and he shall then advise the Contracting Officer of any discrepancies prior to performing any work. The Contractor shall be specifically responsible for the coordination and proper relation of his work to the structure and work of all trades.

## 1.7 WARRANTY

All equipment shall be guaranteed for a period of 2 years from the date of acceptance. Replacement parts shall be guaranteed for 2 years from date of replacement. Warranty shall be against defective materials, design, and workmanship. In cases where the equipment manufacturer's advertised minimum guarantee is in excess of 2 years, it shall remain in force for its full period. Upon receipt of notice from the Government of failure of any of the parts during the warranty period, new replacement parts shall be furnished and installed promptly at no additional cost to the Government.

## 1.8 OPERATION AND MAINTENANCE

The Contractor shall furnish six (6) complete sets of instructions containing the manufacturer's operation and maintenance instructions for each piece of equipment to the Contracting Officer. Each set shall be permanently bound and shall have a hard cover. One complete set shall be furnished prior to field testing and the remaining sets shall be furnished before the contract is completed. The following identification shall be inscribed on the covers: "OPERATING AND MAINTENANCE INSTRUCTIONS," title of the project, location of the project, the name of the Contractor, and the contract number. A flysheet shall be placed before instructions covering each subject. The instruction sheets shall be approximately 8 1/2 by 11 inches, with large sheets of drawings folded in. The instructions shall include, but not be limited to, the following:

- a. A system layout drawing showing the transducers, monitors, emergency controls and controls units.
- b. Electrical wiring and control diagrams.
- c. Operating and maintenance instructions.
- d. Manufacturer's bulletins, catalog cuts, and descriptive data.
- e. Parts lists and recommended spare parts.

The Operation and Maintenance (O&M) Manual shall contain all information which may be needed or useful for operation, maintenance, repair, dismantling or assembling, and for identification of parts for ordering replacements. The manual will be subject to approval.

## 1.9 SCHEMATIC AND DRAWINGS

### 1.9.1 Shop Drawings

Detailed shop drawings shall include fabrication, shop assembly, delivery, and field installation drawings. Any component part of fabricated items omitted shall be detailed on the shop drawings. If departures from the contract drawings are deemed necessary by the Contractor, details of such departures, including changes in related portions of the project and reasons therefore, shall be submitted with the shop drawings.

### 1.9.2 Fabrication Drawings

Fabrication drawings shall be provided for all mechanical and structural parts or components except those which are of standard manufacture. The drawings shall show complete details of materials, tolerances, machined surface finishes, connections, and proposed welding sequences which differentiate shop welds and field welds.

### 1.9.3 Shop Assembly Drawings

Shop assembly drawings shall provide details for connecting the adjoining fabricated components in the shop to ensure satisfactory field installation.

#### 1.9.4 Delivery Drawings

Delivery drawings shall provide descriptions of methods of delivering components to the site, including details for supporting fabricated components during shipping to prevent distortion or other damage.

#### 1.9.5 Field Installation Procedures

Field installation drawings shall provide a detailed description of the field installation procedures. The description shall include the location and method of support of installation and handling equipment, the provisions to be taken to protect concrete and other work during installation, the method of maintaining components in correct alignment, and the methods for installing other appurtenant items.

### PART 2 PRODUCTS

#### 2.1 ELECTRICAL EQUIPMENT

##### 2.1.1 General

The electrical equipment for the position indicating systems shall be as shown and as specified. All electrical equipment furnished shall be standard catalog items under regular manufacture with preexisting catalog ratings equal to or better than the requirements of the contract drawings and specifications. The Contractor's request for approval of equipment other than as specified or as shown shall be accompanied by technical and descriptive data and specifications sufficient for the Contracting Officer to determine its adequacy. Unless otherwise specified or indicated, all electrical materials and equipment shall meet the standards, specifications, and tests referenced.

##### 2.1.2 Standard Products

Where items are referred to hereinafter as "similar and equal to" a particular manufacturer's product, such references have been made merely as a convenient method of indicating the type of material or equipment required, with no intention of asserting superiority thereof. The standard product of any reputable manufacturer regularly engaged in the commercial production of the type and quality of material or equipment referred to will not be excluded on the basis of minor differences, provided essential requirements of the specifications relative to materials, capacity, and performance are met. The Contractor shall, in accordance with paragraph SUBMITTALS, furnish for approval performance capacities and other pertinent information concerning the manufacturer's "equal to" standard products which he intends to incorporate in the work. "Equal to" standard products installed or used without such approval shall be at the risk of subsequent rejection.

##### 2.1.3 Conduit, Duct, and Accessories

Threads on the following equipment shall be American Standard. No metric threads will be accepted.

###### 2.1.3.1 Rigid Metal Conduit

The conduit shall be hot-dip galvanized including the threads. The galvanized conduit shall conform to ANSI C80.1 and UL 6.

### 2.1.3.2 Conduit Fittings

Conduit fittings shall be galvanized, high test, gray iron castings. Gaskets shall be furnished for all covers.

### 2.1.3.3 Conduit and Cabinet Supports

Conduit and cabinets shall be supported as required by electrical standards and code. The supports shall be galvanized .

### 2.1.4 Cabinets and Boxes

Cabinets and boxes shall be watertight, stainless steel, NEMA 4X housings sized as required. The cabinet and box hubs shall be consistent with the NEMA 4X rating of the box. Cabinets and boxes shall be mounted such that the NEMA 4X rating is not compromised. Threads on the hubs shall match the threads on the conduit and shall be American Standard. Metric threads will not be accepted. The cabinets and boxes shall conform to UL 50.

### 2.1.5 Control Components

#### 2.1.5.1 Control Devices and Wiring

Manual or automatic control protective or signal devices required for the specified operation and all control wiring for these controls and devices shall be provided whether indicated or not. Electrical control devices shall have minimum current and voltage ratings in accordance with the requirements of NEMA ICS 2 contact rating designation A 300, as applicable, unless larger ratings are indicated or are required. Control devices shall be provided with the number and arrangement of contacts required to perform the specified control functions. Devices shall be provided with or installed in NEMA 4X enclosures. All devices installed below max flood pool shall be immersible to 150 psi.

#### 2.1.5.3 Electronic Limit Switches

The electronic limit switches shall have solid-state, thumbwheel, programmable limits with a count/revolution range of 0000 to 3599; four decades of limit programming; set point switch function selection; initial power supply that provides AC power levels from standard 120 or 240 VAC sources; and outputs for read-outs on two digital displays (one remote digital read-out in the control room and one at the hydraulic power unit). The operating temperature range of the electronic limit switches shall be 0 degrees C to plus 65 degrees C. Programmable limit switches will not be connected or programmed but shall be provided for future use.

#### 2.1.5.3 Transducer (Electromagnetic Position Sensor)

The transducer shall be single turn, heavy duty, and enclosed in a water-resistant NEMA 13 enclosure and shall have an operating range of minus 20 degrees C to plus 85 degrees C.

#### 2.1.5.4 Remote Read-Out Digital Display

The Contractor shall provide a remote digital display which is to be connected to the BCD output from the limit switch. Read-Out shall be in percent of opening. Readout-Outs shall be installed at EL 953 and EL 1260. Read-Outs shall be installed as shown on the drawings.

## 2.1.6 Position Indicating Panels

### 2.1.6.1 Position Indicating Panel Construction

The position indicating panel shall include a basic frame with metal panels fully custom fabricated or it may consist of custom modules using standardized components where available to meet the dimensional and functional characteristics shown and specified. The console shall be constructed of steel meeting the requirements of NEMA ICS 6. Steel sheet shall conform to ASTM A 659/A 659M. Removable panels shall be secured in place using captive, spring-loaded, self-locking spring nuts and hardened sheet metal screws. Screws and nuts shall be stainless steel. Access panels shall be secured with spring-loaded, quarter-turn fasteners with studs held captive in the removable panel. The panel shall be equipped with adequate louvered panels to ventilate the interior and dissipate the heat generated within the console. Special equipment supports and guides shall be provided as required to support the equipment and other components within the console. The interior and exterior surfaces shall be finished with one coat of primer and two coats of the manufacturer's standard baked-on white enamel finish.

### 2.1.6.2 Amplifiers

Amplifiers will be required between the transducers and the digital readout on EL 1260. Amplifiers will be install when the transducer signal becomes too weak to drive the readout. Amplifiers will be required to drive the signal to the project office.

### 2.1.6.3 Nameplates and Instruction Plates

Nameplates shall be provided for each device on the control console, valve panels, and gauge panels. Nameplates shall clearly indicate the function of each device and, in the case of manually operated controls, shall indicate the condition established for each position of the control. Instruction plates shall clearly indicate the proper procedures and sequences of operations to activate the system, to operate the system, and to secure the system after completion of operation. Lettering on nameplates shall be machine engraved on steel plate. Instruction plates shall be mounted on a rigid backing and covered with clear, rigid plastic sheeting. Instruction plates shall be mounted in a location easily visible to an operator stationed at the console or panel.

### 2.1.6.4 Security Provisions

Control consoles shall be constructed and installed to prevent unauthorized or accidental operation of the system. The control console shall be provided with a hinged cover with a key-operated lock arranged to automatically lock the cover in the closed position.

### 2.1.6.5 Weather Protection

Control consoles and valve and gauge panels exposed to the weather or subjected to water or dirt in the atmosphere shall be NEMA Type 4 for exterior nonhazardous applications. Enclosures shall have hinged and latched covers. Hinges shall be the separable type to permit complete removal of the cover for maintenance. Hinges and latches shall be constructed of stainless steel.

## 2.2 SPARE PARTS

The Contractor shall furnish spare parts in the quantities listed below:

<u>ITEM</u>	<u>QUANTITY</u>
Transducers	Six (6)
Control cards	Three (3)
Amplifiers	Three (3)

## 2.3 SHOP ASSEMBLY AND TESTING

### 2.3.1 Control Units

Control units shall be tested by the installed equipment. Any operational problems will be cause for rejection.

## PART 3 EXECUTION

### 3.1 INSTALLATION

#### 3.1.1 General

The Contractor shall install the equipment specified and as shown on the drawings to complete the control and monitoring of the existing hydraulic power systems for operation of the emergency gates & radial gates. Necessary supports for all appurtenances and other equipment or components shall be provided as shown.

### 3.2 FIELD TESTS AND INSPECTIONS

#### 3.2.1 Field Testing

The Contracting Officer shall be given 2 weeks notice before any field testing is to be conducted. Any material, equipment, instruments, and personnel required for the tests shall be provided by the Contractor. Testing shall be conducted in the presence of the Contracting Officer unless waived in writing and then a certified field test report shall be submitted in accordance with paragraph SUBMITTALS. Testing shall be done under the direction of the erection engineer or manufacturer's representative.

#### 3.2.2 Final Acceptance Tests

In preparation for the final acceptance tests, and after completion of the installation and proof tests, the Contractor shall operate the hydraulic power system to prove acceptability. Details of all operations shall be constantly monitored for signs of impending trouble and corrections shall be made as necessary to prevent damage to the equipment. At such time as the Contracting Officer may direct, the Contractor shall conduct the following complete acceptance tests on the system for approval. Any deficiency or maladjustment disclosed by the tests shall be corrected immediately and the test repeated until satisfactory results are obtained. No subsequent tests will be permitted until all preceding tests have been completed satisfactorily. Upon completion of the final acceptance tests, the Contractor shall furnish a written statement that the system has been field tested and meets all operational requirements.

### 3.2.2.1 Combined System Tests

Tests and inspections of the position indicating system shall be performed concurrently with the testing specified under other sections of these specifications. Response of components to operation of applicable controls shall be inspected to ensure that all connections have been made properly.

### 3.2.2.2 Test Reports

The Contractor shall prepare and complete test reports showing in detail the results of the field tests. The test reports shall include a detailed tabulation showing values of pressures, flow rates, and all adjustments recorded during the final tests, and adjustment and calibration of the entire system. During each test run, the following data and observations shall be recorded:

- a. Control operation
- b. Voltages
- c. Currents

END OF SECTION

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**TECHNICAL EXHIBIT**

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TECHNICAL EXHIBIT 1  
PERFORMANCE REQUIREMENTS SUMMARY

1. GENERAL

Attached to the end of this exhibit is the Performance Requirements Summary (PRS) chart. The PRS provides a list of those requirements which are paid on the basis of a payment computation specified in paragraph 4 of this exhibit. The Performance Requirements Summary will be used to implement the clause CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM under Section E, INSPECTION AND ACCEPTANCE. Refer to paragraph 6 Performance Requirements Summary (PRS) Chart for a description of the items covered under the PRS chart. The absence from this Performance Requirements Summary (PRS) chart of any contract requirements, however, shall not detract from its enforceability or limit the rights or remedies of the Government under any other provision of the contract, including the clauses entitled "Inspection of Services" and "Default".

2. GOVERNMENT QUALITY ASSURANCE

2.1 Contractor performance will be compared to the contract standards and performance requirements as specified in the contract documents using a Quality Assurance Surveillance Plan (QASP) developed by the Government. The Government may use a variety of surveillance methods to evaluate the Contractor's performance. Only one method will be used at a time to evaluate a listed service during an inspection period for payment computation purposes. The methods of surveillance that may be used are:

2.1.1 Periodic or planned surveillance of output items (daily, weekly, monthly, quarterly, semiannually, or annually) as determined necessary to assure a sufficient evaluation of Contractor performance.

2.1.2 One hundred percent inspection of the output.

3. CRITERIA FOR EVALUATING PERFORMANCE

3.1 Performance of a listed service will be accepted and paid for at the maximum payment percentage specified in column 5 of the PRS when the number of defectives found by the QAE during contract surveillance does not exceed the number of defectives allowed by Performance Requirements in column three. When the Performance Requirement is exceeded, the Contractor shall complete Block 9 and 10 of a Contract Discrepancy Report (CDR). The Contractor shall explain in writing why performance was unacceptable, how performance will be returned to acceptable levels, and how recurrence of the problem will be prevented in the future. The Contracting Officer will evaluate the Contractor's explanation and determine if full payment, partial payment, or the contract termination process is applicable. The Contractor's payment for services rendered will be calculated as stated in paragraph 4.

3.2 Determining the Number of Defectives that will Cause Less than Maximum Payment. The number of defects that will cause less than a maximum payment will be determined as follows:

3.2.1 If the Performance Requirement is a constant number of defectives (for example, 2 defectives), the performance requirement plus one or more additional defects will cause less than maximum payment (for example, 3 defects).

3.2.2 If the Performance Requirement is a percentage value, it is multiplied by the lot size to determine the number of defectives that will allow maximum payment. If the resulting value has a decimal it will be rounded to the next higher whole number if the decimal is 0.5 or greater and to the lower whole number if the decimal is less than 0.5. One or more additional defectives will cause less than the maximum payment.

3.2.3 Sample. If a sample of the production output is evaluated on any given day of the contract for a lot based on the number of allowable defects, by planned or periodic inspection, the day's performance will be considered unsatisfactory if either the allowable number of major defects or minor defects is exceeded. If the number of unsatisfactory outputs in the lot exceeds the defect limit described under paragraph 3.2.1 or 3.2.2 then less than the maximum payment will occur.

### 3.3 Acceptance of Re-performance or Late Performance

3.3.1 Except as otherwise provided by subparagraph 3.2 herein, the services required by the contract are of such a nature that defective or- incomplete performance disclosed-by Government inspection is subject to correction by re-performance or late performance, and the Contractor shall be required or entitled to reperform, perform late, or otherwise correct defective services for the purpose of improving an existing inspection rating or avoiding a reduction in the full contract price.

3.3.2 Where the Government so elects, the Contractor shall be notified promptly after inspection that specified defective services will be reperfomed or performed late, and completed within a reasonable time specified by the Government. In such cases, the Government shall reinspect work designated for reperformance or late performance, and the Contractor may be held liable for any damages sustained by the Government including, for example, the costs associated with reinspection.

3.3.2.1 Where the Government allows reperformance or late performance of defective services in a lot, the Contractor shall resubmit the entire service lot for reinspection. Upon reinspection, the original inspection results shall be revised to reflect the resubmitted service lot.

## 4. CONTRACTOR PAYMENT

4.1 For performance of a service that does not exceed the Performance Requirement, the Contractor shall be paid the percentage of the monthly contract line item price indicated in column 5 of the attached PRS chart for that service.

4.2 If performance of a service exceeds the Performance Requirement, the Government will not pay the full percentage in column 5 for that service.

4.2.1 The payment for listed services which exceed the Performance Requirement will be calculated as follows:

4.2.1.1 For services surveilled by periodic or 100 percent inspection, the maximum payment percentage for the service in column 5 of the PRS is multiplied by the percentage of the lot found acceptable. The resulting percentage is the percentage of the monthly contract price that the Contractor will be paid for the listed service. The total number of defectives found, not just the defectives in excess of the reject level, are used to determine the percentage of the lot found unacceptable. The percentage of the lot found unacceptable subtracted from 100 percent determines the percentage of the lot found acceptable.

4.2.1.3 For those services that are performed less frequently than monthly, surveillance and computation of the Contractor's payment will be made during the period that the service is performed, or immediately following the time that the service was performed. The payment computation will be determined for the entire period since the last surveillance and will be based upon the total maximum payment available for the entire period since the last surveillance. Should computation on the Contractor's payment result in an amount less than has already been paid for the preceding month(s) of the period since the last surveillance, the Government will deduct the overpayment from the current month's invoice.

## 5. EXAMPLE PAYMENT COMPUTATIONS

5.1.1 Payment Computation for Required Service (CLIN 0001 – No Defects.) Listed below is a breakdown of the percentage of payment the Contractor shall receive for meeting AQL for work as specified in these contract documents.

Service	Percentage of Payment
(1) CLIN 0001 (RS-1A) No defects	85 % of total payment
(2) CLIN 0001 (RS-1B) No defects	5 % of total payment
(3) CLIN 0001 (RS-1C) No defects	5 % of total payment
(4) CLIN 0001 (RS-1D) No defects	5 % of total payment
	Total of 100 % of CLIN 0001*

### 5.1.2 Example of Payment Computation – Defect(s) Noted Exceeding the AQL (Periodic surveillance)

For this example, assume the following under RS-1A: (1) a performance requirement of zero major defects, (2) a lot size of 6 cylinders and (3) routine QAE inspection was performed during the period (4) that one major defect was noted.

(1) Maximum contract line item payment (CLIN 0001)	\$100,000
(2) Maximum payment percentage for the service (Column 5, PRS, RS-2B)	x 85%
(3) Maximum payment for acceptable service	\$85,000
(4) 1 major defects exceeds AQL of 0.	
(5) Percentage of lot found unacceptable (1/6, defectives divided by lot size, X 100)	16.66%
(6) Percentage of lot found acceptable (100% - Line 5)	83.34%
(7) Payment for percentage of acceptable services (Line 3 X Line 6)	\$70,839

5.1.3 Example of Payment Computation – Defect(s) Noted Exceeding the AQL (Constant AQL and 100 Percent Inspection)

For this example, assume the following under RS-2D: (1) a performance requirement of 5 percent defects, (2) a lot size of 10 submittal items required for the period, and (4) that 2 submittal items were missing or found to be incomplete or otherwise defective for work performed under CLIN 0002.

(1) Maximum contract line item payment (CLIN 0002)	\$100,000
(2) Maximum payment percentage for the service (Column 5, PRS, RS-7)	x 5%
(3) Maximum payment for acceptable service	\$5,000
(4) 2 major defects found exceeds AQL. (.05 x 10 = 1 rounded up)	
(5) Percentage of sample found unacceptable (2/10 X 100)	20%
(6) Percentage of sample found acceptable (100% - Line 4)	80%
(7) Payment for percentage of acceptable services (Line 3 X Line 6)	\$4,000

5.1.4 Example of Payment Computation – Defect(s) Noted Exceeding the AQL (Constant AQL and 100 Percent Inspection)

For this example, assume the following under RS-8: (1) a performance requirement of zero major defects, (2) a lot size of job, and (4) that major defects were found after inspection of submitted data systems.

(1) Maximum contract line item payment per month (CLIN 0008AA)	\$20,000
(2) Maximum payment percentage for the service (Column 5, PRS, RS-2C)	x 100%
(3) Maximum payment for acceptable service	\$20,000
(4) Any major defect found exceeds AQL of 0.	
(5) Percentage of sample found unacceptable (Unit of job is considered unacceptable therefore 1/1 X 100)	100%
(6) Percentage of sample found acceptable (100% - Line 4)	0%
(7) Payment for percentage of acceptable services (Line 3 X Line 6)	\$0.0

This item requires reperformance and acceptable submittal prior to payment

## 6. PERFORMANCE REQUIREMENTS SUMMARY CHART (PRSC)

6.1 The Performance Requirements Summary (PRSC) chart, is located at the end of this section.

6.1.1 Column 1 - Lists those PWSC requirements which are paid for on the basis of payment computation systems specified in paragraph 4 of this section.

6.1.2 Column 2 – Defines the standard of performance for each listed service.

6.1.3 Column 3 – Sets forth the maximum allowable deviation from standard performance for each listed service, Performance Requirement, that may occur before the Government will invoke the payment computation formula resulting in a payment of less than 100 percent of the maximum payment for the listed service.

6.1.4 Column 3 – Defines the lot used as the basis for surveillance or for payment computation purposes.

6.1.5 Column 4 – Sets forth the primary surveillance methods the Government will use to evaluate the Contractor's performance in meeting the contract requirements.

6.1.6 Column 5 – Sets forth the percentage of the contract price that each listed contract requirement represents.

Attachment Follows (PRSC)

END OF SECTION

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## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-1A (CLIN Item 0001)	Use correct repair methods, parts and materials. Meet delivery schedule.	Lot size is the total number of cylinders.  Zero major defects in any cylinder  No more than 3 minor defects in a cylinder.	Periodic Surveillance	85 %  (subject to reperformance)
RS-1B (CLIN Item 0001)	Turn in all removed parts and materials to Government.	Lot size is the total number of removed parts and not reinstalled.  Zero major defects  Each removed part other than pre-expended bin materials and supplies not turned in will be treated as a major defect.	100 % inspection	5 %
RS-1C (CLIN Item 0001)	Dimension validation drawings.	Lot size is the job.  Zero major defects.	100 % inspection	5 %

## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-1D Contract Data, Documentation and Correspondence (CLIN Item 0001)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program. .	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-2A (CLIN Item 0002)	Use correct repair methods, parts and materials. Meet delivery schedule.	Lot size is the total number of cylinders.  Zero major defects in any cylinder  No more than 3 minor defects in a cylinder.	Periodic Surveillance	85 %  (Subject to reperformance )
RS-2B (CLIN Item 0002)	Turn in all removed parts and materials to Government.	Lot size is the total number of removed parts and not reinstalled.  Zero major defects  Each removed part other than pre-expended bin materials and supplies not turned in will be treated as a major defect.	100 % inspection	5 %

## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-2C (CLIN Item 0002)	Dimension validation drawings.	Lot size is the job.  Zero major defects	100 % inspection	5 %
RS-2D Contract Data, Documentation and Correspondence (CLIN Item 0002)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program.	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %

## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-3A (CLIN Items 0003)	Use correct repair methods, parts and materials. Meet delivery schedule.	Lot size is the total number of cylinders.  Zero major defects in any cylinder  No more than 3 minor defects in a cylinder.	Periodic Surveillance	85 %  (Subject to reperformance )
RS-3B (CLIN Items 0003)	Turn in all removed parts and materials to Government.	Lot size is the total number of removed parts and not reinstalled.  Zero major defects  Each removed part other than pre-expended bin materials and supplies not turned in will be treated as a major defect.	100 % inspection	5 %
RS-3C (CLIN Items 0003)	Dimension validation drawings.	Lot size is the job.  Zero major defects	100 % inspection	5 %

## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-3D Contract Data, Documentation and Correspondence (CLIN Item 0003)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program. .	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-4A (CLIN Item 0004)	Use correct methods, parts and materials. Meet delivery schedule.	Lot size is the job.  Zero major defects	100 % inspection	95 %
RS-4B Contract Data, Documentation and Correspondence (CLIN Item 0004)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program.	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-5A (CLIN Item 0005)	Use correct methods, parts and materials. Meet delivery schedule.	Lot size is the job.  Zero major defects in any sample	Periodic Surveillance	95 %  0 % (Reperformance )

## PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-5B Contract Data, Documentation and Correspondence (CLIN Item 0005)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program..	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-6A (CLIN Items 0006)	Use correct test methods.	Lot size is the job.  Zero major defects in any sample	100 % inspection	95 %  0 % (Reperformance )
RS-6B Contract Data, Documentation and Correspondence (CLIN Item 0006)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program.	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-7A (CLIN Item 0007)	Use correct methods, parts and materials. Meet delivery schedule.	Lot size is the job.  Zero major defects in any sample	Periodic Surveillance	95 %  0 % (Reperformance )

PERFORMANCE REQUIREMENTS SUMMARY

REQUIRED SERVICE/ (CLIN)	STANDARD	MAXIMUM ALLOWABLE DEGREE OF DEVIATION FROM REQUIREMENT (AQL)	METHOD OF SURVEILLANCE	MAXIMUM PAYMENT PERCENTAGE FOR MEETING THE AQL
RS-7B Contract Data, Documentation and Correspondence (CLIN Item 0007)	All reports, correspondence maintenance, and repair logs and other data as required are submitted on time and correctly accomplished including quality control program.	Lot size is the number of scheduled contract data items to be submitted during the month  5 percent defects.	100 % inspection	5 %
RS-8 As-Built Drawings (CLIN Item 0008AA)	Manual updating is submitted on time and correctly accomplished.	Lot is job  Zero major defects.	100 % inspection	100 %
RS-9 O&M Data (CLIN Item 0008AB)	Data is submitted on time and correctly accomplished.	Lot is job  Zero major defects.	100 % inspection	100 %

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02032

Intake Works Hydraulic Cylinder Rehab, Mud Mountain Dam, White River, WA

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**SECTION J**

**LIST OF ATTACHMENTS**

ATTACHMENT	TITLE
J01	CONTRACT DATA REQUIREMENTS LIST – DD FORM 1423
J02	INSTRUCTIONS FOR COMPLETING DD FORM 1423
J03	DRAWING INDEX

02032

Intake Works Hydraulic Cylinder Rehab, Mud Mountain Dam, White River, WA

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# CONTRACT DATA REQUIREMENTS LIST

**FORM APPROVED**  
**OMB No. 0704-0188**

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> Contract Data TPD _____ TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
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1. Data Item No. A001	2. Title of Data Item Schedule and Progress Chart	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01140, paragraph 1.1.1
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency R/ASR
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 10 DAC
13. Date of Subsequent Submission M		14. Distribution
16. Remarks		a. Addressee
		Draft
		Final
		Reg
		Repro
		CO 3 3 0
		CP 1 1
		15. Total -----> 4 0

1. Data Item No. A002	2. Title of Data Item Status Reports	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01140, paragraph 1.1.2
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency M
8. APP Code G	11. As of Date DAC	12. Date of First Submission 60 DAC
13. Date of Subsequent Submission M		14. Distribution
16. Remarks		a. Addressee
		Draft
		Final
		Reg
		Repro
		CO 3
		CP 1
		15. Total -----> 4

1. Data Item No. A0003	2. Title of Data Item APP	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01140, paragraph 1.5.1
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
13. Date of Subsequent Submission R/ASR		14. Distribution
16. Remarks		a. Addressee
		Draft
		Final
		Reg
		Repro
		CO 3 3
		CP 1 1
		15. Total ----->

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference
6. Requiring Office		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
13. Date of Subsequent Submission		14. Distribution
16. Remarks		a. Addressee
		Draft
		Final
		Reg
		Repro
		15. Total ----->

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	<b>J. Date</b>
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**CONTRACT DATA REQUIREMENTS LIST**

**FORM APPROVED  
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. B001	2. Title of Data Item Employee Listing		3. Subtitle Inventory		
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 01145, para 2.1		6. Requiring Office CO, CP
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 5 DAC	14. Distribution	
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission R/ASR	a. Addressee	
				b. Copies	
16. Remarks				Draft	Final
				Reg	Repro
				CO	3
				CP	1
15. Total ----->					4

1. Data Item No. C001	2. Title of Data Item Environmental Protection Plan		3. Subtitle		
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 01355, para 1.6		6. Requiring Office CO, CP
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution	
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee	
				b. Copies	
16. Remarks				Draft	Final
				Reg	Repro
				CO	3
				CP	1
15. Total ----->					0

1. Data Item No.	2. Title of Data Item		3. Subtitle		
4. Authority (Data Acquisition Document No.)			5. Contract Reference		6. Requiring Office
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission	14. Distribution	
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	
				b. Copies	
16. Remarks				Draft	Final
				Reg	Repro
				15. Total ----->	

1. Data Item No.	2. Title of Data Item		3. Subtitle		
4. Authority (Data Acquisition Document No.)			5. Contract Reference		6. Requiring Office
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission	14. Distribution	
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	
				b. Copies	
16. Remarks				Draft	Final
				Reg	Repro
				15. Total ----->	

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	<b>J. Date</b>
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**CONTRACT DATA REQUIREMENTS LIST**

**FORM APPROVED  
OMB No. 0704-0188**

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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. D001	2. Title of Data Item Interim Quality Control Plan-Services	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01451, para 1.3
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 14 DAC
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
CP		Final
		Reg
		Repro
16. REMARKS		15. Total ----->
		5 5

1. Data Item No. D002	2. Title of Data Item Quality Control Plan-Services	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01451, para 1.3
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		13. Date of Subsequent Submission R/ASR
a. Addressee		b. Copies
CO		Draft
CP		Final
		Reg
		Repro
16. Remarks		15. Total ----->
		5 5

1. Data Item No. D003	2. Title of Data Item Proposed changes in CQC plan	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 01451, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 10 DBD
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		15. Total ----->
		5 0

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference
6. Requiring Office		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
		Draft
		Final
		Reg
		Repro
16. Remarks		15. Total ----->

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	<b>J. Date</b>
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# CONTRACT DATA REQUIREMENTS LIST

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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. D004	2. Title of Data Item Proposed changes in CQC staff	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01451, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 10 PTI	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks						4	
				15. Total ----->		4	

1. Data Item No. D005	2. Title of Data Item CQC Records Form	3. Subtitle
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4. Authority (Data Acquisition Document No.) OTIME	5. Contract Reference SECTION 01451, para 1.3	6. Requiring Office CO, CP
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission (a)	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO CP	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks (a) Submit with CQC Plan.						3	0
				15. Total ----->		4	

1. Data Item No. D006	2. Title of Data Item Monthly CQC Minutes	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01451, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency M	12. Date of First Submission 60 DAC	14. Distribution			
8. APP Code FIO		11. As of Date AWARD	13. Date of Subsequent Submission M	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. REMARKS						3	
				15. Total ----->		3	

1. Data Item No. D007	2. Title of Data Item Daily CQC Records	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01451, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency D	12. Date of First Submission NLT 24 HRS	14. Distribution			
8. APP Code FIO		11. As of Date (a)	13. Date of Subsequent Submission D	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. REMARKS (a) Site mobilization						3	
				15. Total ----->		3	

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	<b>J. Date</b>
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----------------------------------	------------------------	----------------------------------	--

<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. E001	2. Title of Data Item Drawings Of Temporary Power Connections	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01501, para 1.3.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission RASR	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks						5	0
				15. Total ----->		5	0

1. Data Item No. E002	2. Title of Data Item Housekeeping Plan	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01501, para 1.6	6. Requiring Office CO
--	--	---------------------------

7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 10 DAC	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks						3	
				15. Total ----->		3	

1. Data Item No. E003	2. Title of Data Item Fall Protection System	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01501, para 1.7	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 10 DAC	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks						3	
				15. Total ----->			

1. Data Item No.	2. Title of Data Item	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference	6. Requiring Office
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission	14. Distribution			
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies	
						Final	
						Reg	Repro
16. Remarks							
				15. Total ----->			

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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----------------------------------	------------------------	----------------------------------	--

<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
-----------------------	---------------------------	----------------------

1. Data Item No. F001	2. Title of Data Item Equipment-in-place Lis	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01705, para 1.1	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 10 CDB	14. Distribution			
8. APP Code G		11. As of Date FI	13. Date of Subsequent Submission R/ASR	a. Addressee	Draft	b. Copies	
						Final	
						Reg	Repro

16. Remarks				CO		4	
				15. Total ----->		4	

1. Data Item No. G001	2. Title of Data Item Working Record Drawings	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01780, para 1.1	6. Requiring Office CO
--	--	---------------------------

7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 CDB	14. Distribution			
8. APP Code G		11. As of Date FI	13. Date of Subsequent Submission ASREQ	a. Addressee	Draft	b. Copies	
						Final	
						Reg	Repro

16. Remarks				CO	2	1	
				15. Total ----->	2	1	

1. Data Item No. G002	2. Title of Data Item Preliminary Final CADD Record Drawings	3. Subtitle
--------------------------	---	-------------

4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01780, para 1.1	6. Requiring Office CO
--	--	---------------------------

7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 7 CDB	14. Distribution			
8. APP Code G		11. As of Date FI	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies	
						Final	
						Reg	CD

16. Remarks				CO	2		1
				15. Total ----->	2		1

1. Data Item No. G003	2. Title of Data Item Final CADD Record Drawings	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 01780, para 1.1	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission NLT 30 CDA	14. Distribution			
8. APP Code G		11. As of Date AOW	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies	
						Final	
						Reg	CD

16. REMARKS				CO			2
				15. Total ----->			2

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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**CONTRACT DATA =**

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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
-----------------------	---------------------------	----------------------

1. Data Item No. H001	2. Title of Data Item Preliminary O& M Manual	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 01782, para 1.2.1		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date FI	12. Date of First Submission 60 CDB
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		3
15. Total ----->		3

1. Data Item No. H002	2. Title of Data Item Operations And Maintenance Manua	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 01782, para 1.2.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date FI	12. Date of First Submission NLT 30 CDA
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		6
15. Total ----->		6

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office
5. Contract Reference		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office
5. Contract Reference		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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----------------------------------	------------------------	----------------------------------	--

<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. I001	2. Title of Data Item Order of Work	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 05054, para 1.2
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 14 DAC
13. Date of Subsequent Submission		14. Distribution
16. Remarks		a. Addressee
		Draft
		b. Copies
		Final
		Reg
		Repro
		3
		0
		1
		4
		0
		15. Total ----->

1. Data Item No. I002	2. Title of Data Item Purify Hydraulic Oil	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 05054, para 1.2
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 14 DAC
13. Date of Subsequent Submission		14. Distribution
16. Remarks		a. Addressee
		Draft
		b. Copies
		Final
		Reg
		Repro
		4
		4
		15. Total ----->

1. Data Item No. I003	2. Title of Data Item Hydraulic Pump Coupling Replacemen	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 05054, para 1.2
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 14 DAC
13. Date of Subsequent Submission		14. Distribution
16. REMARKS		a. Addressee
		Draft
		b. Copies
		Final
		Reg
		Repro
		4
		1
		4
		1
		15. Total ----->

1. Data Item No. I004	2. Title of Data Item High Water Notification and Evacuation Plan	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 05054, para 1.2
6. Requiring Office CO, CP		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
13. Date of Subsequent Submission		14. Distribution
16. Remarks		a. Addressee
		Draft
		b. Copies
		Final
		Reg
		Repro
		4
		1
		4
		1
		15. Total ----->

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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**CONTRACT DATA REQUIREMENTS LIST**

**FORM APPROVED  
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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. I005	2. Title of Data Item Hatch and Bonnet Cover Seals	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05054, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		4
15. Total ----->		4

1. Data Item No. I006	2. Title of Data Item Lifting Devices	3. Subtitle SD-9
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05054, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		4
		0
15. Total ----->		4
		0

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office
5. Contract Reference		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office
5. Contract Reference		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. J001	2. Title of Data Item Detail Drawings	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05055, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		3
		0
15. Total ----->		3
		0

1. Data Item No. J002	2. Title of Data Item Purchased Items	3. Subtitle Product Data
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05055, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 14 CD PTI
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		4
		0
15. Total ----->		4
		0

1. Data Item No. J003	2. Title of Data Item Materials List	3. Subtitle Product Data
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05055, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code FIO	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		4
		0
15. Total ----->		4
		0

1. Data Item No. J004	2. Title of Data Item Shop Test Procedures	3. Subtitle
4. Authority (Data Acquisition Document No.)		6. Requiring Office CO
5. Contract Reference SECTION 05055, para 1.2		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		b. Copies
a. Addressee		Draft
		Final
		Reg
		Repro
16. Remarks		CO
		4
		0
15. Total ----->		4
		0

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. J005	2. Title of Data Item Test Reports	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 05055, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission See B 16	14. Distribution			
8. APP Code G		11. As of Date See B 16	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
					Draft	Final	
					Reg	Repro	
16. Remarks AWARD or DOT 30 DAC or NLT 48 HR AFT DOT, as applicable					3	0	
				15. Total ----->	3	0	

1. Data Item No. J006	2. Title of Data Item Certificates	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 05055, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission See B 16	14. Distribution			
8. APP Code G		11. As of Date See B 16	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
					Draft	Final	
					Reg	Repro	
16. Remarks AWARD or DOT 30 DAC or NLT 48 HR AFT DOT, as applicable					3	0	
				15. Total ----->	3	0	

1. Data Item No. J007	2. Title of Data Item Machine Shop Qualifications	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 05055, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
					Draft	Final	
					Reg	Repro	
16. Remarks					3		
				15. Total ----->	3		

1. Data Item No.	2. Title of Data Item	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference	6. Requiring Office
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission	14. Distribution			
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	b. Copies		
					Draft	Final	
					Reg	Repro	
16. Remarks							
				15. Total ----->			

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. K001	2. Title of Data Item Shop Fabricated Metal Items		3. Subtitle Shop Drawings			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 05502, para 1.2			
6. Requiring Office CO						
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC			
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission			
16. Remarks			14. Distribution			
			a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	
			15. Total ----->	3 0		

1. Data Item No. K002	2. Title of Data Item Miscellaneous Metals and Standard Metal Article:		3. Subtitle Product Data			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 05502, para 1.2			
6. Requiring Office CO						
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC			
8. APP Code FIO		11. As of Date AWARD	13. Date of Subsequent Submission			
16. Remarks			14. Distribution			
			a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	
			15. Total ----->	3 0		

1. Data Item No. K003	2. Title of Data Item Shop Fabricated Metal Items		3. Subtitle Product Data			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 05502, para 1.2			
6. Requiring Office CO						
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC			
8. APP Code FIO		11. As of Date AWARD	13. Date of Subsequent Submission			
16. Remarks			14. Distribution			
			a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	
			15. Total ----->	3 0		

1. Data Item No. K004	2. Title of Data Item Miscellaneous Metals and Standard Metal Article:		3. Subtitle Samples			
4. Authority (Data Acquisition Document No.)			5. Contract Reference SECTION 05502, para 1.2			
6. Requiring Office CO						
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission NLT 60 DAC			
8. APP Code FIO		11. As of Date AWARD	13. Date of Subsequent Submission			
16. Remarks			14. Distribution			
			a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	
			15. Total ----->	1 1		

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>A. Contract Line Item No.</b>				<b>B. Exhibit</b> B		<b>C. Category:</b> TPD _____ TM _____ OTHER _____		Contract Data	
<b>D. System/Item</b>				<b>E. Contract/PR No.</b>		<b>F: Contractor</b>			
1. Data Item No. K005		2. Title of Data Item Shop Fabricated Metal Items				3. Subtitle Samples			
4. Authority (Data Acquisition Document No.)				5. Contract Reference SECTION 05502, para 1.2		6. Requiring Office CO			
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission NLT 60 DAC	14. Distribution					
8. APP Code FIO		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final			
						Reg	Repro		
16. Remarks				CO			1	0	
				15. Total ----->			1	0	
1. Data Item No. K006		2. Title of Data Item Miscellaneous Metals and Standard Metal Article:				3. Subtitle Test Reports			
4. Authority (Data Acquisition Document No.)				5. Contract Reference SECTION 05502, para 1.2		6. Requiring Office CO			
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission See B 16	14. Distribution					
8. APP Code FIO		11. As of Date See B 16	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final			
						Reg	Repro		
16. Remarks AWARD or DOT 30 DAC or NLT 48 HR AFT DOT, as applicable				CO			3	0	
				15. Total ----->			3	0	
1. Data Item No. K007		2. Title of Data Item Shop Fabricated Metal Items				3. Subtitle Test Reports			
4. Authority (Data Acquisition Document No.)				5. Contract Reference SECTION 05502, para 1.2		6. Requiring Office CO			
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission See B 16	14. Distribution					
8. APP Code FIO		11. As of Date See B 16	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final			
						Reg	Repro		
16. Remarks AWARD or DOT 30 DAC or NLT 48 HR AFT DOT, as applicable				CO			3		
				15. Total ----->			3		
1. Data Item No.		2. Title of Data Item				3. Subtitle			
4. Authority (Data Acquisition Document No.)				5. Contract Reference		6. Requiring Office			
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission	14. Distribution					
8. APP Code		11. As of Date	13. Date of Subsequent Submission	a. Addressee	Draft	b. Copies			
						Final			
						Reg	Repro		
16. Remarks									
				15. Total ----->					
<b>G. Prepared By</b>				<b>H. Date</b>		<b>I. Approve By</b>			

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. L001	2. Title of Data Item Safety and Health Provisions	3. Subtitle Product Data	
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3	
6. Requiring Office CO, CP		7. DD 250 REQ.	
9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission R/ASR	14. Distribution
			a. Addressee
16. Remarks		b. Copies	
		Draft	Final
		Reg	Repro
		4	0
		1	
		5	0
		15. Total ----->	

1. Data Item No. L002	2. Title of Data Item Confined Spaces	3. Subtitle Product Data	
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3	
6. Requiring Office CO, CP		7. DD 250 REQ.	
9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission R/ASR	14. Distribution
			a. Addressee
16. Remarks		b. Copies	
		Draft	Final
		Reg	Repro
		4	0
		1	
		5	0
		15. Total ----->	

1. Data Item No. L003	2. Title of Data Item Certified Laboratory	3. Subtitle Product Data	
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3	
6. Requiring Office CO		7. DD 250 REQ.	
9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission	14. Distribution
			a. Addressee
16. Remarks		b. Copies	
		Draft	Final
		Reg	Repro
		4	0
		4	0
		15. Total ----->	

1. Data Item No. L004	2. Title of Data Item Airborne Sampling Plan	3. Subtitle Product Data	
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3	
6. Requiring Office CO		7. DD 250 REQ.	
9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission	14. Distribution
			a. Addressee
16. Remarks		b. Copies	
		Draft	Final
		Reg	Repro
		4	0
		4	0
		15. Total ----->	

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. L005	2. Title of Data Item Ventilation	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					4	0
				15. Total ----->	4	0

1. Data Item No. L006	2. Title of Data Item Medical Status	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission R/ASR	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					3	0
				15. Total ----->	3	0

1. Data Item No. L007	2. Title of Data Item Environmental Protection	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					3	0
				15. Total ----->	3	0

1. Data Item No. L008	2. Title of Data Item Waste Classification. Handling & Disposal	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					3	0
				15. Total ----->	3	0

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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**CONTRACT DATA REQUIREMENTS LIST**

**FORM APPROVED  
OMB No. 0704-0188**

Public reporting burden for this collection of information is estimated to average 440 hours per response including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspects of this collection or any aspects of information including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting Officer for the Contract/PR No. listed in Block E.

<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F: Contractor</b>
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1. Data Item No. L009	2. Title of Data Item Containment	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					4	0
				15. Total ----->	4	0

1. Data Item No. L010	2. Title of Data Item Visible Emissions Monitoring	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					4	0
				15. Total ----->	4	0

1. Data Item No. L011	2. Title of Data Item Soil Quality Plan	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					4	0
				15. Total ----->	4	0

1. Data Item No. L012	2. Title of Data Item Specification & Proprietary Paints	3. Subtitle Samples
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro
16. Remarks					5	0
				15. Total ----->	5	0

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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# CONTRACT DATA REQUIREMENTS LIST

**FORM APPROVED**  
**OMB No. 0704-0188**

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
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1. Data Item No. L013	2. Title of Data Item Thinners	3. Subtitle Samples
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date AWARD	12. Date of First Submission 30 DAC
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		5
		0
15. Total ----->		5
		0

1. Data Item No. L014	2. Title of Data Item TSP Monitoring Report	3. Subtitle Test Reports
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date DOT	12. Date of First Submission NLT 48 HRS
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		5
		0
15. Total ----->		5
		0

1. Data Item No. L015	2. Title of Data Item Airborne Sampling Report	3. Subtitle Test Reports
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date DOT	12. Date of First Submission NLT 5 WD
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		5
		0
15. Total ----->		5
		0

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference
6. Requiring Office		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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# CONTRACT DATA REQUIREMENTS LIST

**FORM APPROVED**  
**OMB No. 0704-0188**

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
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1. Data Item No. L016	2. Title of Data Item PM-10 Monitoring	3. Subtitle Test Reports
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code FIO	11. As of Date DOT	12. Date of First Submission NLT 48 HRS
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		5
		0
15. Total ----->		5
		0

1. Data Item No. L017	2. Title of Data Item Soil Quality Report	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference SECTION 09965, para 1.3
6. Requiring Office CO		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code G	11. As of Date DOT	12. Date of First Submission NLT 48 HRS
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
CO		Draft
		Final
		Reg
		Repro
16. Remarks		5
		0
15. Total ----->		5
		0

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference
6. Requiring Office		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

1. Data Item No.	2. Title of Data Item	3. Subtitle
4. Authority (Data Acquisition Document No.)		5. Contract Reference
6. Requiring Office		
7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency
8. APP Code	11. As of Date	12. Date of First Submission
14. Distribution		13. Date of Subsequent Submission
a. Addressee		b. Copies
		Draft
		Final
		Reg
		Repro
16. Remarks		
15. Total ----->		

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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# CONTRACT DATA REQUIREMENTS LIST

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
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1. Data Item No. L018	2. Title of Data Item Inspection & Operation Records	3. Subtitle Test Reports
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission NLT 24 HRS	14. Distribution		
8. APP Code G		11. As of Date DOI	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. L019	2. Title of Data Item Qualifications & Experience	3. Subtitle Certificates
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. L020	2. Title of Data Item Qualified Painting Contractor	3. Subtitle Test Reports
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. L021	2. Title of Data Item Qualified Coating Thickness Gages	3. Subtitle
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 09965, para 1.3	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____ TM _____ OTHER _____	Contract Data
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<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
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1. Data Item No. M001	2. Title of Data Item Schematic & Drawings	3. Subtitle Shop Drawings
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. M002	2. Title of Data Item Materials and Mechanical Equipment	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. M003	2. Title of Data Item Electrical Equipment	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

1. Data Item No. M004	2. Title of Data Item System Description	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G		11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies	
					Draft	Final
					Reg	Repro

16. Remarks					5	0
				15. Total ----->	5	0

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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# CONTRACT DATA REQUIREMENTS LIST

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<b>A. Contract Line Item No.</b>	<b>B. Exhibit</b> B	<b>C. Category:</b> TPD _____	<b>Contract Data</b> TM _____ OTHER _____
----------------------------------	------------------------	----------------------------------	--

<b>D. System/Item</b>	<b>E. Contract/PR No.</b>	<b>F. Contractor</b>
-----------------------	---------------------------	----------------------

1. Data Item No. M005	2. Title of Data Item Design and Performance Requirements	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	

16. Remarks							
				15. Total ----->	5	0	

1. Data Item No. M006	2. Title of Data Item Field Testing	3. Subtitle Product Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 DAC	14. Distribution		
8. APP Code G	11. As of Date AWARD	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	

16. Remarks							
				15. Total ----->	5	0	

1. Data Item No. M007	2. Title of Data Item Field Tests	3. Subtitle Test Reports
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission NLT 24 HRS	14. Distribution		
8. APP Code G	11. As of Date DOT	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	

16. Remarks							
				15. Total ----->	5	0	

1. Data Item No. M008	2. Title of Data Item Operation and Maintenance	3. Subtitle Data
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4. Authority (Data Acquisition Document No.)	5. Contract Reference SECTION 15010, para 1.2	6. Requiring Office CO
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7. DD 250 REQ.	9. Dist. Statement Required	10. Frequency	12. Date of First Submission 30 CDB	14. Distribution		
8. APP Code G	11. As of Date FI	13. Date of Subsequent Submission	a. Addressee CO	b. Copies		
				Draft	Final	
				Reg	Repro	

16. Remarks							
				15. Total ----->	5	0	

<b>G. Prepared By</b>	<b>H. Date</b>	<b>I. Approve By</b>	
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**ATTACHMENT J02**

**INSTRUCTIONS FOR COMPLETING DD FORM 1423**

ADDRESS AND CODES

1. Where the following symbol is shown in Block 14 the material shall be addressed as follows:

Symbol	Address
CO	(To be designated by Contracting Officer)
CP	U.S. Army Corps of Engineers, Seattle District ATTN: CENWS-PM-CP. (Mr. Stephen Pierce) PO BOX 3755 Seattle, WA 98124-3755

2. The codes, if used, are defined as follows:

<u>Code</u>	<u>Block</u>	<u>Definition</u>
AOW	11	Acceptance of Work
AFT	12	After
ASREQ	10, 11, 12	As required.
CD	12, 13	Calendar days.
CDA	12	Calendar days after
CDB	12	Calendar days before
DAC	12	Days after receipt of contract.
DAR	13	Days after receipt of drawings APPROVED AS NOTED RETURNED FOR CORRECTION.
DOI	11	Date of Inspection
DOT	11	Date of Test.
FI	11	Final inspection.
FIO	8	For information only
G	8	Requires specific approval.
HRS	12	Hours
M	10	Monthly.
NLT	12	Not later than
ONE/R	10	One time plus revisions.
OTIME	10	One time.
PTI	12	Prior to installation/prior to implementation
RASR	13	Revisions as required.
W	10	Weekly.
WD	12	Working Days
XX	7	Inspection and acceptance requirements specified elsewhere in contract.

**ATTACHMENT J03****DRAWING INDEX**

Intake Works Hydraulic Cylinder Rehab,  
Mud Mountain Dam, White River, WA

Drawing File No. E-3-8-362

SHEET NUMBE R	PLATE NUMBER	TITLE	REVISION NUMBER	DATE
1	M1.01	Cover Sheet – State and Area Map		06 AUG 02
2	M1.02	Index and Vicinity Plan		10 APR 03
3	M1.03	Intake Works Area		06 AUG 02
4	M1.04	Gate Operation Structure – Removal and Reinstallation of Access Hatches, Plans, Sections and Details		06 AUG 02
5	M2.01	E-1, E-2, R-1 and R-2 Hydraulic Cylinders - Transverse Sections Thru Water Passage and Photos		06 AUG 02
6	M2.02	E-3 and R-3 Hydraulic Cylinders - Transverse Sections Thru Water Passage and Photos		06 AUG 02
7	M2.03	General Elevations of Existing Hydraulic Cylinder Set with Extensions and New Work Indicated		06 AUG 02
8	M3.01	Cylinder and Bonnet Modification Assemblies		06 AUG 02
9	M3.02	Existing Cylinder Rod Seals with Modifications Indicated		06 AUG 02
10	M3.03	Existing Gate Bonnet Modifications		06 AUG 02
11	M3.04	Emergency Gate Cylinders E-1 & E-2 - Modification Part Details for Water Seal 8” Rod		06 AUG 02

**DRAWING INDEX (Cont.)**

12	M3.05	Emergency Gate Cylinder E-3 - Modification Part Details for Water Seal 10" Dia. Rod	06 AUG 02
13	M3.06	Radical Gate Cylinders R1, R2, and R3 - Modification Part Details for Water Seal 8" Rod	06 AUG 02
14	M4.01	Emergency Gate Position Transducer Installation - Plans, Section, and Details	06 AUG 02
15	E1.01	Electrical Plans	06 AUG 02
16	E1.02	Electrical Sections and Diagrams	06 AUG 02
17	M4.02	Radical Gate Cylinder Water Test Apparatus and Transducer Replacement – Elevations and Sections	06 AUG 02
18	S1.1	Platform Plan 1	10 APR 03
19	S1.2	Platform Plans 2 & 3	10 APR 03
20	S1.3	Platform Plan 4	10 APR 03
21	S1.4	Platform Plans 5 & 6	10 APR 03
22	S1.5	Platform Elevations 1, 2 & 3	10 APR 03
23	S1.6	Platform Elevations 4, 5 & 6	10 APR 03
24	S1.7	Grating Plan	10 APR 03

**DRAWING INDEX (Cont.)****REFERENCE DRAWINGS**

Reference drawings provided show conditions at time of construction. These drawings are furnished for information only and the Government does not warrant that conditions will be exactly as shown. Minor deviations can be anticipated and shall not be the basis for a claim for extra compensation.

REFERENCE DRAWING NUMBER	ORIGINAL PLATE NUMBER	TITLE	DATE
RF-1	S-42	Gate Chamber – Plans II	92JUL02
RF-2	S-43	Gate Chamber – Plans III	92JUL02
RF-3	S-103	Gate Operations Structure – Plans I	92SEP25
RF-4	S-104	Gate Operations Structure – Plans II	92JUL02
RF-5	S-105	Gate Operations Structure – Plans III	91NOV15
RF-6	S-106	Gate Operations Structure – Plans IV	92AUG07
RF-7	S-87	Radical Gates – Elevations & Sections	92AUG07
RF-8	S-92	Conduits No. 1 & 2 – Emergency Gate	91JUL18
RF-9	--	Existing Emergency Gate Cylinder – General Assemblies	02AUG06
RF-10	--	Existing Radical Gate Cylinder – General Assemblies	02AUG06
RF-11	S-149	Airshaft/Elevator Towers – Key Plan and Isometrics	92JUL02
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RF-13	S-154	Airshaft/Elevator Towers – Plans	92AUG07
RF-14	M-4	Gate Chamber Drainage Plan	92JUL02
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**DRAWING INDEX (Cont.)****REFERENCE DRAWINGS**

REFERENCE DRAWING NUMBER	ORIGINAL PLATE NUMBER	TITLE	DATE
RF-16	--	Existing Hydraulic System Schematic Gate Controls System	02AUG06
RF-17	--	Existing Hydraulic System Schematic Gate Controls System	02AUG06
RF-18	--	Existing Hydraulic System Schematic Gate Control System	02AUG06
RF-19	--	Existing Hydraulic System Schematic Radial Gate – Backup (Redundant) System	02AUG06
RF-20	E-21	Airshaft/Elevator Towers – Power Distribution I	92SEP25
RF-21	E-23	Gate Operations Level – Power Distribution I	91NOV15
RF-22	E-24	Gate Operations Level – Power Distribution II	92SEP25
RF-23	E-25	Gate Operations Level – Power Distribution III	92SEP25
RF-24	E-26	Gate Chambers/Access Shafts – Power and Lighting Plans	91NOV15
RF-25	E-36	Gate Control Sequence Program	91NOV25
RF-26	E-37	Control Panel Configuration	91NOV25
RF-27	E-38	Control Diagrams	91NOV15
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**REFERENCE DRAWINGS**

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