



**US Army Corps  
of Engineers**  
Portland District

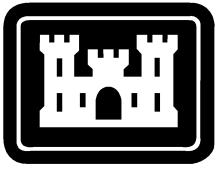
**REQUEST FOR PROPOSALS  
W9127N-07-R-0031**

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**NORTH PACIFIC REGION  
FEDERAL COLUMBIA POWER SYSTEM**

**GOVERNOR CONTROL SYSTEM  
RETROFITS**

**PROJECT MANUAL**



North Pacific Region  
Federal Columbia Power System  
Governor Replacements and Upgrades

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<b>SOLICITATION, OFFER AND AWARD</b>				1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING		PAGE 1 OF 2 PAGES 1 239		
2. CONTRACT NO.		3. SOLICITATION NO. W9127N-07-R-0031		4. TYPE OF SOLICITATION [ ] SEALED BID (IFB) [X] NEGOTIATED (RFP)		5. DATE ISSUED 13 June 2008		6. REQUISITION/PURCHASE NO.		
7. ISSUED BY US ARMY CORPS OF ENGINEER 333 SW FIRST AVE PORTLAND OR 97204-3495  COD W9127N  TEL: 503-808-4606 FAX 503-808-4605				8. ADDRESS OFFER TO (If other than Item 7) CODE  <b>See Item 7</b>  TEL: FAX						
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".										
<b>SOLICITATION</b>										
9. Sealed offers in original and <u>6</u> copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in <u>333 SW First Ave Portland, OR 97204</u> until <u>1600</u> local <u>3 Sept 2008</u> (Hour) (Date)										
CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.										
10. FOR INFORMATION CALL:		A. NAME Amy Kelm			B. TELEPHONE (Include area code) (NO COLLECT CALLS) 503-808-4606			C. E-MAIL ADDRESS Amy.A.Kelm@usace.army.mil		
<b>11. TABLE OF CONTENTS</b>										
(X)	SEC	DESCRIPTION			PAGE(S)	(X)	SEC	DESCRIPTION		
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X	E	INSPECTION AND ACCEPTANCE			E1-3	X	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS		
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<b>OFFER (Must be fully completed by offeror)</b>										
NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.										
12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.										
13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)										
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):					AMENDMENT NO.		DAT		AMENDMENT NO.	
15A. AN ADDRESS OF OFFEROR		COD		FACILITY		16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)				
15B. TELEPHONE NO (Include area code)		<input type="checkbox"/>		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.		17. SIGNATURE		18. OFFER DATE		
<b>AWARD (To be completed by Government)</b>										
19. ACCEPTED AS TO ITEMS NUMBERED				20. AMOUNT		21. ACCOUNTING AND APPROPRIATION				
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )						23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)			ITEM	
24. ADMINISTERED BY (If other than Item 7) CODE						25. PAYMENT WILL BE MADE BY COD				
26. NAME OF CONTRACTING OFFICER (Type or print)  TEL: EMAIL:						27. UNITED STATES OF AMERICA (Signature of Contracting Officer)			28. AWARD DATE	
IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.										

## **SECTION B**

### **SUPPLIES OR SERVICES & PRICES/COSTS**

B.1 The supplies or services and prices/costs of this contract are provided under an Indefinite Quantity Contract that allows for the award of one contract. The cumulative total amount of the aforementioned contract will not exceed \$9 million dollars. The successful offeror will be issued task orders for actual work as specified in Section C of the contract.

B. 2 Work locations may include any site within the Federal Columbia River Power System (FCRPS), and the Columbia, Snake and Willamette River Systems that covers the following district offices: Seattle District, Portland District, and Walla Walla District. (Section J, Attachment No. J3). The contract awarded will have a minimum guarantee of \$80,000.00. The contract issued will have a base period of two (2) years from the date of award with a single three (3) year option period. Specific tasks and pricing information for work to be performed under this contract are included in the contract award. Task orders will be issued on a firm fixed priced basis.

**PRICE SCHEDULE  
NORTHWEST PACIFIC REGION (NPR) GOVERNORS  
BASE PERIOD**

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
<b>Base Period – 2 years from Date of Award</b>					
<b>Note that contractor shall provide the Portland District Point of Contact with a quarterly report detailing capacity usage by Bid Item.</b>					
0001	Furnish Governor Math Model for Kaplan Turbine (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
0002	Furnish Governor Math Model for Francis Turbine (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
0003	Furnish System Design Specification, Kaplan (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
0004	Furnish System Design Specification, Francis (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
0005	PLC Application Software Development Suite (SEC 26 00 10.00 25)	2	Each	\$ _____	\$ _____
0006	Furnish Governor Controller Software Kaplan (SEC 26 00 10.00 25)	95	Each	\$ _____	\$ _____
0007	Furnish Governor Controller Software Francis (SEC 26 00 10.00 25)	51	Each	\$ _____	\$ _____
0008	Spare Parts, Kaplan (SEC 26 00 10.00 25)	20	Lot	\$ _____	\$ _____
0009	Spare Parts, Francis (SEC 26 00 10.00 25)	20	Lot	\$ _____	\$ _____
0010	Training of Government Operations Personnel Kaplan (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
0011	Training of Government Maintenance Personnel Kaplan (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
0012	Training of Government Operations Personnel Francis (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
0013	Training of Government Maintenance Personnel Francis (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
0014	Services of an Erection Engineer, Kaplan (SEC 26 00 10.00 25)	200	Day	\$ _____	\$ _____
0015	Services of an Erection Engineer, Francis (SEC 26 00 10.00 25)	100	Day	\$ _____	\$ _____
0016	Programming Services (SEC 26 00 10.00 25)	200	Day	\$ _____	\$ _____
0017	Travel for Erection Engineer and Programmer IAW JTR per Task Order (SEC 26 00 10.00 25)		Trip	xxxxxx	xxxxxx
0018	<b>ALBENI FALLS PROJECT</b>			xxxxxx	xxxxxx
0018AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$ _____	\$ _____
0018AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$ _____	\$ _____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0019	<b>CHIEF JOSEPH PROJECT</b>			xxxxxx	xxxxxx
0019AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	16	Lot	\$_____	\$_____
0019AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0019BA	Furnish Voest-Alpine Main Unit Governor Retrofit Equipment - Francis	11	Lot	\$_____	\$_____
0019BB	Furnish Voest-Alpine Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0020	<b>LIBBY PROJECT</b>			xxxxxx	xxxxxx
0020AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	5	Lot	\$_____	\$_____
0020AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0021	<b>BONNEVILLE PROJECT</b>			xxxxxx	xxxxxx
0021AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	8	Lot	\$_____	\$_____
0021AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0021BA	Furnish Woodward Fish Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
0021BB	Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0022	<b>THE DALLES PROJECT</b>			xxxxxx	xxxxxx
0022AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	14	Lot	\$_____	\$_____
0022AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0022BA	Furnish Pelton Fish Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
0022BB	Furnish Pelton Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0022CA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	8	Lot	\$_____	\$_____
0022CB	Furnish Woodward Main Unit Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0023	<b>JOHN DAY PROJECT</b>			xxxxxx	xxxxxx
0023AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	16	Lot	\$_____	\$_____
0023AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0024	<b>BIG CLIFF PROJECT</b>			xxxxxx	xxxxxx
0024AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	1	Lot	\$_____	\$_____
0024AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0025	<b>COUGAR PROJECT</b>			xxxxxx	xxxxxx
0025AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0025AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0026	<b>DETROIT PROJECT</b>			xxxxxx	xxxxxx
0026AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0026AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0027	<b>DEXTER PROJECT</b>			xxxxxx	xxxxxx
0027AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	1	Lot	\$_____	\$_____
0027AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0028	<b>FOSTER PROJECT</b>			xxxxxx	xxxxxx
0028AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
0028AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0029	<b>GREEN PETER PROJECT</b>			xxxxxx	xxxxxx
0029AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0029AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0029	<b>GREEN PETER PROJECT (CONT.)</b>			xxxxxx	xxxxxx
0029BA	Furnish Woodward Fish Unit Governor Retrofit Equipment - Francis	1	Lot	\$_____	\$_____
0029BB	Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0030	<b>HILLS CREEK PROJECT</b>			xxxxxx	xxxxxx
0030AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0030AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0031	<b>LOOKOUT POINT PROJECT</b>			xxxxxx	xxxxxx
0031AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
0031AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0032	<b>LOST CREEK PROJECT</b>			xxxxxx	xxxxxx
0032AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0032AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0033	<b>MCNARY PROJECT</b>			xxxxxx	xxxxxx
0033AA	Furnish Pelton Station Service Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
0033AB	Furnish Pelton Station Service Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0033BA	Furnish Allis-Charmers Main Unit Governor Retrofit Equipment - Kaplan	4	Lot	\$_____	\$_____
0033BB	Furnish Allis-Charmers Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0033CA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	10	Lot	\$_____	\$_____
0033CB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____



Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0034	<b>ICE HARBOR PROJECT</b>			xxxxxx	xxxxxx
0034AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0034AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0034BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0034BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0035	<b>LOWER MONUMENTAL PROJECT</b>			xxxxxx	xxxxxx
0035AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0035AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0035BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0035BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0036	<b>LITTLE GOOSE PROJECT</b>			xxxxxx	xxxxxx
0036AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0036AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0036BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0036BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0037	<b>LOWER GRANITE PROJECT</b>			xxxxxx	xxxxxx
0037AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0037AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 33 00, SEC 26 00 10.00 25, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0037BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
0037BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0038	<b>DWORSHAK PROJECT</b>			xxxxx	xxxxxx
0038AA	Furnish Woodard Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
0038AB	Furnish Woodard Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
0039	Control Room Human-Machine Interface (HMI) (SEC 26 00 10.00 25)	36	Each	\$_____	\$_____
<b>BASE PERIOD TOTAL</b>					\$_____

**BID SCHEDULE  
NORTHWEST PACIFIC REGION (NPR) GOVERNORS  
OPTION PERIOD**

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
<b>Option Period – 3 years from End of Base Period</b>					
<b>Note that contractor shall provide the Portland District Point of Contact with a quarterly report detailing capacity usage by Bid Item.</b>					
1001	Furnish Governor Math Model for Kaplan Turbine (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
1002	Furnish Governor Math Model for Francis Turbine (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
1003	Furnish System Design Specification, Kaplan (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
1004	Furnish System Design Specification, Francis (SEC 26 00 10.00 25)	1	Each	\$ _____	\$ _____
1005	PLC Application Software Development Suite (SEC 26 00 10.00 25)	2	Each	\$ _____	\$ _____
1006	Furnish Governor Controller Software Kaplan (SEC 26 00 10.00 25)	95	Each	\$ _____	\$ _____
1007	Furnish Governor Controller Software Francis (SEC 26 00 10.00 25)	51	Each	\$ _____	\$ _____
1008	Spare Parts, Kaplan (SEC 26 00 10.00 25)	20	Lot	\$ _____	\$ _____
1009	Spare Parts, Francis (SEC 26 00 10.00 25)	20	Lot	\$ _____	\$ _____
1010	Training of Government Operations Personnel Kaplan (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
1011	Training of Government Maintenance Personnel Kaplan (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
1012	Training of Government Operations Personnel Francis (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
1013	Training of Government Maintenance Personnel Francis (SEC 26 00 10.00 25)	50	Each	\$ _____	\$ _____
1014	Services of an Erection Engineer, Kaplan (SEC 26 00 10.00 25)	200	Day	\$ _____	\$ _____
1015	Services of an Erection Engineer, Francis (SEC 26 00 10.00 25)	100	Day	\$ _____	\$ _____
1016	Programming Services (SEC 26 00 10.00 25)	200	Day	\$ _____	\$ _____
1017	Travel for Erection Engineer and Programmer IAW JTR per Task Order (SEC 26 00 10.00 25)		Trip	xxxxxx	xxxxxx
1018	<b>ALBENI FALLS PROJECT</b>			xxxxxx	xxxxxx
1018AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$ _____	\$ _____
1018AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$ _____	\$ _____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1019	<b>CHIEF JOSEPH PROJECT</b>			xxxxxx	xxxxxx
1019AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	16	Lot	\$_____	\$_____
1019AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1019BA	Furnish Voest-Alpine Main Unit Governor Retrofit Equipment - Francis	11	Lot	\$_____	\$_____
1019BB	Furnish Voest-Alpine Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1020	<b>LIBBY PROJECT</b>			xxxxxx	xxxxxx
1020AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	5	Lot	\$_____	\$_____
1020AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1021	<b>BONNEVILLE PROJECT</b>			xxxxxx	xxxxxx
1021AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	8	Lot	\$_____	\$_____
1021AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1021BA	Furnish Woodward Fish Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
1021BB	Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1022	<b>THE DALLES PROJECT</b>			xxxxxx	xxxxxx
1022AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	14	Lot	\$_____	\$_____
1022AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1022BA	Furnish Pelton Fish Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
1022BB	Furnish Pelton Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1022CA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	8	Lot	\$_____	\$_____
1022CB	Furnish Woodward Main Unit Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1023	<b>JOHN DAY PROJECT</b>			xxxxxx	xxxxxx
1023AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	16	Lot	\$_____	\$_____
1023AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1024	<b>BIG CLIFF PROJECT</b>			xxxxxx	xxxxxx
1024AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	1	Lot	\$_____	\$_____
1024AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1025	<b>COUGAR PROJECT</b>			xxxxxx	xxxxxx
1025AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1025AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1026	<b>DETROIT PROJECT</b>			xxxxxx	xxxxxx
1026AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1026AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1027	<b>DEXTER PROJECT</b>			xxxxxx	xxxxxx
1027AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	1	Lot	\$_____	\$_____
1027AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1028	<b>FOSTER PROJECT</b>			xxxxxx	xxxxxx
1028AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	2	Lot	\$_____	\$_____
1028AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1029	<b>GREEN PETER PROJECT</b>			xxxxxx	xxxxxx
1029AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1029AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1029	<b>GREEN PETER PROJECT (CONT.)</b>			xxxxxx	xxxxxx
1029BA	Furnish Woodward Fish Unit Governor Retrofit Equipment - Francis	1	Lot	\$_____	\$_____
1029BB	Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1030	<b>HILLS CREEK PROJECT</b>			xxxxxx	xxxxxx
1030AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1030AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1031	<b>LOOKOUT POINT PROJECT</b>			xxxxxx	xxxxxx
1031AA	Furnish Woodward Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
1031AB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1032	<b>LOST CREEK PROJECT</b>			xxxxxx	xxxxxx
1032AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1032AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1033	<b>MCNARY PROJECT</b>			xxxxxx	xxxxxx
1033AA	Furnish Pelton Station Service Unit Governor Retrofit Equipment - Francis	2	Lot	\$_____	\$_____
1033AB	Furnish Pelton Station Service Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1033BA	Furnish Allis-Charmers Main Unit Governor Retrofit Equipment - Kaplan	4	Lot	\$_____	\$_____
1033BB	Furnish Allis-Charmers Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1033CA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	10	Lot	\$_____	\$_____
1033CB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1034	<b>ICE HARBOR PROJECT</b>			xxxxxx	xxxxxx
1034AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
1034AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1034BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
1034BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1035	<b>LOWER MONUMENTAL PROJECT</b>			xxxxxx	xxxxxx
1035AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
1035AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1035BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
1035BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1036	<b>LITTLE GOOSE PROJECT</b>			xxxxxx	xxxxxx
1036AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
1036AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1036BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
1036BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1037	<b>LOWER GRANITE PROJECT</b>			xxxxxx	xxxxxx
1037AA	Furnish Pelton Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
1037AB	Furnish Pelton Main Unit Governor Operation and Maintenance Manuals (SEC 01 33 00, SEC 26 00 10.00 25, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1037BA	Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan	3	Lot	\$_____	\$_____
1037BB	Furnish Woodward Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1038	<b>DWORSHAK PROJECT</b>			xxxxxx	xxxxxx
1038AA	Furnish Woodard Main Unit Governor Retrofit Equipment - Francis	3	Lot	\$_____	\$_____
1038AB	Furnish Woodard Main Unit Governor Operation and Maintenance Manuals (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)	1	Lot	\$_____	\$_____
1039	Control Room Human-Machine Interface (HMI) (SEC 26 00 10.00 25)	36	Each	\$_____	\$_____
<b>OPTION PERIOD TOTAL</b>					\$_____

#### ESTIMATED BID ITEM

The quantity for Bid Items marked EST is estimated and may be increased or decreased at the discretion of the Government. The "Estimated Initial Quantity" is provided to establish a common basis for Offerors to provide bids. Actual usage may be lower or higher than the estimates.

(End of Section B)



## **SECTION C**

### **DESCRIPTIVE/SPECIFICATION/WORK STATEMENT**

- C.1 General Description
- C.2 Work Statement of Services
- C.3 Performance of Services
- C.4 Personnel
- C.5 Equipment, Supplies, Documents and Data
- C.6 Contractor Compensation
- C.7 Subcontractor
- C.8 Specifications

## SECTION C

### DESCRIPTIVE/SPECIFICATION/WORK STATEMENT

#### C.1 General Description

C.1.1 Background. The hydroelectric facilities in the North Pacific Region of the Northwestern Division of the U.S. Army Corps of Engineers, primarily covering the States of Washington, Oregon, Idaho, and Montana have hydraulic turbine governors that are aging, and becoming difficult to maintain in good operating order.

C.1.2 Description. This indefinite delivery indefinite quantity (IDIQ) contract is for equipment to replace control portions of existing hydraulic turbine governors with Programmable Logic Controller (PLC) based digital control equipment. A list of the Hydroelectric Power Plants within the North Pacific Region of the Northwestern Division is included as Section J, Attachment No. J1.

#### C.2 Work Statement of Services

C.2.1 General. Contractor tasks will be specified under each Task Order executed under this contract. Task Orders will be issued on an as-required basis.

C.2.2 Equipment. Equipment to be furnished for the Power Plants, but not installed under this IDIQ Contract, includes retrofit equipment to replace portions of existing hydraulic turbine generator governors. Procurement of retrofit hardware and software for governors for both Francis and Kaplan type turbines is contemplated. Existing governors are:

Allis Chalmers Mechanical Governors;  
Pelton Mechanical Governors by Baldwin-Lima-Hamilton;  
Pelton Mechanical Governors;  
Voest-Alpine Analog Electric Governors;  
Woodward Mechanical Governors;  
Woodward Analog Electronic Governors.

C.2.3 Tasks. Tasks will be to manufacture, Factory Test, and ship certain equipment to replace portions of existing hydroelectric turbine Governors at Corps of Engineers projects in the North Pacific Region (NPR) of the Northwestern Division (NWD) of the Corps of Engineers.

C.2.4 Travel. Travel for one or more Erection Engineers shall be required to accomplish the work specified in each task order. Note that Task Orders may overlap in time of performance. The place of performance for site work to be performed will be within the powerhouse as identified in the individual task order. Travel costs must comply with Joint Travel Regulations (JTR) and are limited to what is allowed by the Federal Acquisition Regulations (FAR), note FAR 31.205-46, Travel Costs.

#### C.3 Performance of Services

C.3.1 Rendering Service. The Contractor shall render the required services as required by the individual task order, or as ordered by the Contracting Officer during the contract period. The Contractor shall be capable of supporting Erection Engineer work at not less than two widely separated Project Sites for 12 hours each day. Contractor shall have the production capability to manufacture Governor retrofit equipment as specified for at least two separate Projects simultaneously.

C.3.2 Designation of Contract Manager. Within thirty (30) calendar days from the date of award of the base contract, the Contractor shall notify the Government as to whom it has designated as the Contract Manager for the work to be performed under this contract. The Contract Manager shall serve as the point of contact between the Government and the Contractor and shall have full authority to act on behalf of the Contractor.

#### **C.4 Personnel**

C.4.1 General. The Contractor shall furnish the services of professionally qualified personnel, under the terms and conditions set forth in the contract and the individual Task Orders, to serve as Erection Engineers on site at Corps of Engineers Projects. Engineering technical support may require the following disciplines: Electrical and Mechanical Engineers.

C.4.2 Contract Manager. The Contract Manager (CM) shall be the single point of contact for this Contract. The CM shall be knowledgeable in management of hydroelectric turbine governor production, production scheduling, and the specific activities identified in this contract or the individual Task Orders. The CM, if so designated in writing, is responsible for identifying to the government in writing those individuals who have contractual authority for the company. If any individual with such authority is replaced, submit notification in writing to the Contracting Officer within five business days.

C.4.3 Task Manager. For each Task Order issued, the Contractor shall designate in writing, to the issuing Contracting Officer, a Task Manager (TM). The Task Manager can be the Contract Manager. The TM shall be the single point of contact for the Task Order, and shall be responsible for the management and execution of all activities in exact accordance with the requirements of the Task Order. If the TM is replaced, submit notification in writing to the issuing Contracting Officer within five business days.

C.4.4 Erection Engineer. For each Task Order issued, designate in writing, to the issuing Contracting Officer, the name and qualifications of the Erection Engineer within 30 calendar days after award. The Erection Engineer will be the single point of contact for the Task Order at the governor installation site. The Erection Engineer shall be proficient in communication in the English language, and be technically qualified in the manufacture, application, testing, and adjustment of hydro turbine governor retrofit equipment to be furnished under the Task Order.

C.4.5 Other Personnel Qualifications. The qualifications for other personnel may be specified under individual Task Orders.

#### **C.5 Equipment, Supplies, Documents, and Data**

C.5.1 Contractor-Furnished Items. Specific equipment, materials, documents and data to be furnished by the Contractor will be as detailed in these Specifications, and individual Task Orders, as applicable. Contractor-furnished items shall be as required in the individual Task Order.

C.5.2 Government-Furnished Supplies. There will be no Government-Furnished supplies or equipment.

#### **C.6 Contractor Compensation**

Each task order will be issued as Firm Fixed Price.

## **C.7 Subcontractor**

C.7.1 Subcontracts. The Contractor shall cause appropriate contract clauses and other terms and conditions to be inserted in all subcontracts relating to this Contract, and insure fulfillment by subcontractors.

C.7.2 Relationship Between Subcontractor and Government. Nothing contained in this Contract shall be construed as a contractual relationship between the Government and any subcontractor of the Primary Contractor.

### C.7.3 Approval of Subcontractors.

C.7.3.1 Prior to award of any Task Order in which subcontractors will be used, the Contractor may be asked to provide, in writing, a list of all the subcontractors, a statement to the extent and character of the work to be done under the subcontract, and the following information:

1. Name and designation; and
2. Experience with respect to performing their element(s) of work as referenced in the Task Order for each individual task order.

C.7.3.2 Once a subcontractor is submitted with a proposal, and if the award has been made based on the subcontractor's experience or capabilities, the Contractor cannot change subcontractors unless justification has been made in writing and approved by the Contracting Officer of the ordering office specified on the Task Order.

C.7.4 Subcontractor's Performance. If for sufficient reason at any time during the performance of the work of any task order it is determined that any subcontractor is incompetent or is not performing the work in an acceptable manner; the Contractor will be notified in writing accordingly by the Government. Immediate steps shall be taken by the Contractor to obtain acceptable performance or cancel such subcontracts. Subletting by subcontractors shall be subject to the same requirement. The Contractor shall be responsible for all costs relating to any delay and/or disruption of work under this provision.

## **C.8 Specifications**

01 22 00.00 10	MEASUREMENTS AND PAYMENTS
01 30 60.00 25	OPERATIONS AND MAINTENANCE DATA
01 33 00	SUBMITTAL PROCEDURES
01 42 00	SOURCES OF REFERENCED PUBLICATIONS
26 00 00.00 25	MISCELLANEOUS ELECTRICAL EQUIPMENT AND WORK
26 00 10.00 25	GOVERNOR REPLACEMENT (DIGITAL RETROFIT)

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01 33 00	SUBMITTAL PROCEDURES
01 42 00	SOURCES FOR REFERENCE PUBLICATIONS

### DIVISION 26 - ELECTRICAL

26 00 00.00 25	MISCELLANEOUS ELECTRICAL EQUIPMENT AND WORK
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##### 1.2.1 Unit Definitions

###### 1.2.1.1 Each

###### 1.2.1.2 Lots

###### 1.2.1.3 Days

##### 1.2.2 Services of Erection Engineer

##### 1.2.3 Programming Services

#### 1.3 PAYMENT

1.3.1 PRICE SCHEDULE Item No. 0001 and 1001 Furnish Governor Math Model for Kaplan Turbine

1.3.2 PRICE SCHEDULE Item No. 0002 and 1002 Furnish Governor Math Model for Francis Turbine

1.3.3 PRICE SCHEDULE Item No. 0003 and 1003 Furnish System Design Specifications, Kaplan

1.3.4 PRICE SCHEDULE Item No. 0004 and 1004 Furnish System Design Specifications, Francis

1.3.5 PRICE SCHEDULE Item No. 0005 and 1005 PLC Application Software Development Suite

1.3.6 PRICE SCHEDULE Item No. 0006 and 1006 Furnish Governor Controller Software, Kaplan

1.3.7 PRICE SCHEDULE Item No. 0007 and 1007 Furnish Governor Controller Software, Francis

1.3.8 PRICE SCHEDULE Item No. 0008 and 1008 Spare Parts, Kaplan

1.3.9 PRICE SCHEDULE Item No. 0009 and 1009 Spare Parts, Francis

1.3.10 PRICE SCHEDULE Item No. 0010 and 1010 Training of Government Operations Personnel, Kaplan

1.3.11 PRICE SCHEDULE Item No. 0011 and 1011 Training of Government Maintenance Personnel, Kaplan

1.3.12 PRICE SCHEDULE Item No. 0012 and 1012 Training of Government Operations Personnel, Francis

1.3.13 PRICE SCHEDULE Item No. 0013 and 1013 Training of Government Maintenance Personnel, Francis

1.3.14 PRICE SCHEDULE Item No. 0014 and 1014 Services of an Erection Engineer, Kaplan

1.3.15 PRICE SCHEDULE Item No. 0015 and 1015 Services of an Erection Engineer, Francis

1.3.16 PRICE SCHEDULE Item No. 0016 and 1016 Programming Services

1.3.17 PRICE SCHEDULE Item No. 0017 and 1017 Travel for Erection Engineer and Programmer IAW JTR per Task Order

##### 1.3.18 Albeni Falls Project

1.3.18.1 PRICE SCHEDULE Item No. 0018AA and 1018AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

1.3.18.2 PRICE SCHEDULE Item No. 0018AB and 1018AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

##### 1.3.19 Chief Joseph Project

1.3.19.1 PRICE SCHEDULE Item No. 0019AA and 1019AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

- 1.3.19.2 PRICE SCHEDULE Item No. 0019AB and 1019AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.19.3 PRICE SCHEDULE Item No. 0019BA and 1019BA Furnish Voest-Alpine Main Unit Governor Retrofit Equipment - Francis
- 1.3.19.4 PRICE SCHEDULE Item No. 0019BB and 1019BB Furnish Voest-Alpine Main Unit Governor Operation and Maintenance Manuals
- 1.3.20 Libby Project
  - 1.3.20.1 PRICE SCHEDULE Item No. 0020AA and 1020AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.20.2 PRICE SCHEDULE Item No. 0020AB and 1020AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.21 Bonneville Project
  - 1.3.21.1 PRICE SCHEDULE Item No. 0021AA and 1021AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.21.2 PRICE SCHEDULE Item No. 0021AB and 1021AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
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  - 1.3.21.4 PRICE SCHEDULE Item No. 0021BB and 1021BB Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals
- 1.3.22 The Dalles Project
  - 1.3.22.1 PRICE SCHEDULE Item No. 0022AA and 1022AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.22.2 PRICE SCHEDULE Item No. 0022AB and 1022AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
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  - 1.3.23.2 PRICE SCHEDULE Item No. 0023AB and 1023AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
- 1.3.24 Big Cliff Project
  - 1.3.24.1 PRICE SCHEDULE Item No. 0024AA and 1024AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.24.2 PRICE SCHEDULE Item No. 0024AB and 1024AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.25 Cougar Project
  - 1.3.25.1 PRICE SCHEDULE Item No. 0025AA and 1025AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.25.2 PRICE SCHEDULE Item No. 0025AB and 1025AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.26 Detroit Project
  - 1.3.26.1 PRICE SCHEDULE Item No. 0026AA and 1026AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.26.2 PRICE SCHEDULE Item No. 0026AB and 1026AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.27 Dexter Project
  - 1.3.27.1 PRICE SCHEDULE Item No. 0027AA and 1027AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.27.2 PRICE SCHEDULE Item No. 0027AB and 1027AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.28 Foster Project

- 1.3.28.1 PRICE SCHEDULE Item No. 0028AA and 1028AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
- 1.3.28.2 PRICE SCHEDULE Item No. 0028AB and 1028AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
- 1.3.29 Green Peter Project
  - 1.3.29.1 PRICE SCHEDULE Item No. 0029AA and 1029AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.29.2 PRICE SCHEDULE Item No. 0029AB and 1029AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
  - 1.3.29.3 PRICE SCHEDULE Item No. 0029BA and 1029BA Furnish Woodward Fish Unit Governor Retrofit Equipment - Francis
  - 1.3.29.4 PRICE SCHEDULE Item No. 0029BB and 1029BB Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals
- 1.3.30 Hills Creek Project
  - 1.3.30.1 PRICE SCHEDULE Item No. 0030AA and 1030AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.30.2 PRICE SCHEDULE Item No. 0030AB and 1030AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.31 Lookout Point Project
  - 1.3.31.1 PRICE SCHEDULE Item No. 0031AA and 1031AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.31.2 PRICE SCHEDULE Item No. 0031AB and 1031AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.32 Lost Creek Project
  - 1.3.32.1 PRICE SCHEDULE Item No. 0032AA and 1032AA Furnish Pelton Main Unit Governor Retrofit Equipment - Francis
  - 1.3.32.2 PRICE SCHEDULE Item No. 0032AB and 1032AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
- 1.3.33 McNary Project
  - 1.3.33.1 PRICE SCHEDULE Item No. 0033AA and 1033AA Furnish Pelton Station Service Unit Governor Retrofit Equipment - Francis
  - 1.3.33.2 PRICE SCHEDULE Item No. 0033AB and 1033AB Furnish Pelton Station Service Unit Governor Operation and Maintenance Manuals
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  - 1.3.33.5 PRICE SCHEDULE Item No. 0033CA and 1033CA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.33.6 PRICE SCHEDULE Item No. 0033CB and 1033CB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
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  - 1.3.34.1 PRICE SCHEDULE Item No. 0034AA and 1034AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.34.2 PRICE SCHEDULE Item No. 0034AB and 1034AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
  - 1.3.34.3 PRICE SCHEDULE Item No. 0034BA and 1034BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.34.4 PRICE SCHEDULE Item No. 0034BB and 1034BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.35 Lower Monumental Project
  - 1.3.35.1 PRICE SCHEDULE Item No. 0035AA and 1035AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.35.2 PRICE SCHEDULE Item No. 0035AB and 1035AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
  - 1.3.35.3 PRICE SCHEDULE Item No. 0035BA and 1035BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.35.4 PRICE SCHEDULE Item No. 0035BB and 1035BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals



- 1.3.36 Little Goose Project
  - 1.3.36.1 PRICE SCHEDULE Item No. 0036AA and 1036AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.36.2 PRICE SCHEDULE Item No. 0036AB and 1036AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
  - 1.3.36.3 PRICE SCHEDULE Item No. 0036BA and 1036BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.36.4 PRICE SCHEDULE Item No. 0036BB and 1036BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.37 Lower Granite Project
  - 1.3.37.1 PRICE SCHEDULE Item No. 0037AA and 1037AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.37.2 PRICE SCHEDULE Item No. 0037AB and 1037AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals
  - 1.3.37.3 PRICE SCHEDULE Item No. 0037BA and 1037BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan
  - 1.3.37.4 PRICE SCHEDULE Item No. 0037BB and 1037BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.38 Dworshak Project
  - 1.3.38.1 PRICE SCHEDULE Item No. 0038AA and 1038AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis
  - 1.3.38.2 PRICE SCHEDULE Item No. 0038AB and 1038AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals
- 1.3.39 PRICE SCHEDULE Item No. 0039 and 1039 Control Room Human-Machine Interface (HMI)

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

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SECTION 01 22 00.00 10

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 GENERAL INFORMATION

The following measurement and payment paragraphs describe what shall constitute full compensation for all work incidental to completion of the work under those bid items. In the event any work is required by the specifications sections or by the drawings and not specifically mentioned in the measurement and payment paragraphs, separate or direct payment will not be made and all costs thereof are incidental to and included in the contract prices and payments for all items listed in the PRICE SCHEDULE.

The word "provided" shall be understood to mean "furnished" when used in this section or elsewhere in the technical sections, but note that Governor Installation is not included under this Solicitation, or in any resulting Contract.

"Contracting Officer", when used in this Section, shall be construed to mean either the Contracting Officer (CO) or their authorized Representative (COR)

1.2 MEASUREMENT

1.2.1 Unit Definitions

1.2.1.1 Each

Line items with a 'Unit' designated 'Each' will be measured for payment as a lump sum in the 'Unit Price' locations indicated. This measurement includes all incidental work and materials such as assembly, fittings, fasteners, wire, miscellaneous relays and electrical materials that are necessary to make a complete installation. 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.

1.2.1.2 Lots

The measurement for items listed as 'Lots' indicate such items as assemblies, spare parts consisting of a specific group of parts, or materials identified in the specifications.

1.2.1.3 Days

Erection Engineer measurement of time will be Units of 'Days', with a 'Day' defined as one Erection Engineer working as needed for a period of at least six hours, but not exceeding 12 hours, within a 24 hour period. No separate measurement for supervision, helper labor, overhead and/or other markups will be made as they are incidental to the service being furnished.

1.2.2 Services of Erection Engineer

Each Task Order issued under the IDIQ Contract that may result from this solicitation may have a requirement for the Services of an Erection

Engineer. Such services shall be supplied as requested by the Contracting Officer, and will be paid for at the rate quoted by you in this Solicitation.

#### 1.2.3 Programming Services

Each Task Order issued under the IDIQ Contract that may result from this solicitation may have a requirement for Programming Services. Such services shall be supplied as requested by the Contracting Officer, and will be paid for at the rate quoted by you in this Solicitation.

#### 1.3 PAYMENT

Payment for all work specified, shown or incidental to complete the work will be made as follows:

##### 1.3.1 PRICE SCHEDULE Item No. 0001 and 1001 Furnish Governor Math Model for Kaplan Turbine

Payment for the Kaplan Turbine Governor Model will be made as a lump sum under Line Item No. 0001 or 1001. Price and Payment shall constitute full compensation for all design, labor, materials, and equipment required to develop the model and test it for conformance with the specification requirements. Payment will be made after acceptance by the government. (SEC 26 00 10.00 25)

##### 1.3.2 PRICE SCHEDULE Item No. 0002 and 1002 Furnish Governor Math Model for Francis Turbine

Payment for the Francis Turbine Governor Model will be made as a lump sum under Line Item No. 0002 or 1002. Price and Payment shall constitute full compensation for all design, labor, materials, and equipment required to develop the model and test it for conformance with the specification requirements. Payment will be made after acceptance by the government. (SEC 26 00 10.00 25)

##### 1.3.3 PRICE SCHEDULE Item No. 0003 and 1003 Furnish System Design Specifications, Kaplan

Payment for the Kaplan Governor System Design Specification (SDS) will be made as a lump sum under Line Item No. 0003 or 1003. Price and Payment shall constitute full compensation for all design, labor, materials, and equipment required to develop the Kaplan Governor System Design Specification in conformance with specification requirements. Payment will be made after acceptance by the government. (SEC 26 00 10.00 25)

##### 1.3.4 PRICE SCHEDULE Item No. 0004 and 1004 Furnish System Design Specifications, Francis

Payment for the Francis Governor System Design Specification (SDS) will be made as a lump sum under Line Item No. 0004 or 1004. Price and Payment shall constitute full compensation for all design, labor, materials, and equipment required to develop the Francis Governor System Design Specification in conformance with specification requirements. Payment will be made after acceptance by the government. (SEC 26 00 10.00 25)

1.3.5 PRICE SCHEDULE Item No. 0005 and 1005 PLC Application Software Development Suite

Payment for each copy of the PLC Application Software Development Suite, the Screen and Display Builder software, and the fully configured laptop computers on which the software is installed will be made at the unit price under Line Item 0005 or 1005. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, configure, and deliver the hardware and software to the destination address. Payment will be made after acceptance by the Government. (SEC 26 00 10.00 25)

1.3.6 PRICE SCHEDULE Item No. 0006 and 1006 Furnish Governor Controller Software, Kaplan

Payment for each copy of the Kaplan Governor Controller Software will be made separately at the unit price under Line Item 0006 and 1006. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, configure, and deliver the software to the destination address. Payment will be made after acceptance by the Government. (SEC 26 00 10.00 25)

1.3.7 PRICE SCHEDULE Item No. 0007 and 1007 Furnish Governor Controller Software, Francis

Payment for each copy of the Francis Governor Controller Software will be made separately at the unit price under Line Item 0007 and 1007. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, configure, and deliver the software to the destination address. Payment will be made after acceptance by the Government. (SEC 26 00 10.00 25)

1.3.8 PRICE SCHEDULE Item No. 0008 and 1008 Spare Parts, Kaplan

Payment for furnishing each lot of spare parts for Kaplan units will be made separately as a lump sum under Line Item 0008 and 1008. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, and deliver the spare parts in conformance to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.9 PRICE SCHEDULE Item No. 0009 and 1009 Spare Parts, Francis

Payment for furnishing each lot of spare parts for Francis units will be made separately as a lump sum under Line Item 0009 and 1009. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, and deliver the spare parts in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.10 PRICE SCHEDULE Item No. 0010 and 1010 Training of Government Operations Personnel, Kaplan

Payment for each group of training sessions for government operations personnel on the Kaplan equipment will be made separately at the unit price under Line Item 0010 and 1010. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to prepare

training manuals and conduct the required training sessions in conformance to the specifications at the installation site. Payment will be made upon completion of the required number of training sessions. (SEC 26 00 10.00 25)

1.3.11 PRICE SCHEDULE Item No. 0011 and 1011 Training of Government Maintenance Personnel, Kaplan

Payment for each group of training sessions for government maintenance personnel on the Kaplan equipment will be made separately at the unit price under Line Item 0011 and 1011. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to prepare training manuals and conduct the required training sessions in conformance to the specifications at the installation site. Payment will be made upon completion of the required number of training sessions. (SEC 26 00 10.00 25)

1.3.12 PRICE SCHEDULE Item No. 0012 and 1012 Training of Government Operations Personnel, Francis

Payment for each group of training sessions for government operations personnel on the Francis equipment will be made separately at the unit price under Line Item 0012 and 1012. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to prepare training manuals and conduct the required training sessions in conformance to the specifications at the installation site. Payment will be made upon completion of the required number of training sessions. (SEC 26 00 10.00 25)

1.3.13 PRICE SCHEDULE Item No. 0013 and 1013 Training of Government Maintenance Personnel, Francis

Payment for each group of training sessions for government maintenance personnel on the Francis equipment will be made separately at the unit price under Line Item 0013 and 1013. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to prepare training manuals and conduct the required training sessions in conformance to the specifications at the installation site. Payment will be made upon completion of the required number of training sessions. (SEC 26 00 10.00 25)

1.3.14 PRICE SCHEDULE Item No. 0014 and 1014 Services of an Erection Engineer, Kaplan

Payment for each day of Erection Engineer Services for Kaplan units will be paid at the unit price under Line Item 0014 and 1014. Price and payment will constitute full compensations for periods that the Erection Engineer is on site as requested by the Government to provide services at the Installation Site. (SEC 26 00 10.00 25)

1.3.15 PRICE SCHEDULE Item No. 0015 and 1015 Services of an Erection Engineer, Francis

Payment for each day of Erection Engineer Services for Francis units will be paid at the unit price under Line Item 0015 and 1015. Price and payment will constitute full compensation for periods that the Erection Engineer is on site as requested by the Government to provide services at the installation site. (SEC 26 00 10.00 25)

1.3.16 PRICE SCHEDULE Item No. 0016 and 1016 Programming Services

Payment for each day of Programming Services will be paid at the unit price under Line Item 0016 and 1016. Price and payment will constitute full compensation for periods that the programmer is on site as requested by the Government to provide programming services at the installation site. (SEC 26 00 10.00 25)

1.3.17 PRICE SCHEDULE Item No. 0017 and 1017 Travel for Erection Engineer and Programmer IAW JTR per Task Order

Payment for the Erection Engineer and Programmer's travel and lodging expenses will be made under Line Item 0017 and 1017. Travel and lodging expenses are reimbursable items, and the Contractor will be reimbursed in accordance with the requirements of the Department of Defense Joint Travel Regulations per Task Order.

1.3.18 Albeni Falls Project

1.3.18.1 PRICE SCHEDULE Item No. 0018AA and 1018AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Albeni Falls Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0018AA and 1018AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.18.2 PRICE SCHEDULE Item No. 0018AB and 1018AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0018AB and 1018AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.19 Chief Joseph Project

1.3.19.1 PRICE SCHEDULE Item No. 0019AA and 1019AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Chief Joseph Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0019AA and 1019AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.19.2 PRICE SCHEDULE Item No. 0019AB and 1019AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0019AB and 1019AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.19.3 PRICE SCHEDULE Item No. 0019BA and 1019BA Furnish Voest-Alpine Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Chief Joseph Voest-Alpine main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0019BA and 1019BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.19.4 PRICE SCHEDULE Item No. 0019BB and 1019BB Furnish Voest-Alpine Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0019BB and 1019BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.20 Libby Project

1.3.20.1 PRICE SCHEDULE Item No. 0020AA and 1020AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Libby Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0020AA and 1020AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.20.2 PRICE SCHEDULE Item No. 0020AB and 1020AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0020AB and 1020AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting

Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.21 Bonneville Project

##### 1.3.21.1 PRICE SCHEDULE Item No. 0021AA and 1021AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Bonneville Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0021AA and 1021AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.21.2 PRICE SCHEDULE Item No. 0021AB and 1021AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0021AB and 1021AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

##### 1.3.21.3 PRICE SCHEDULE Item No. 0021BA and 1021BA Furnish Woodward Fish Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Bonneville Woodward fish unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0021BA and 1021BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.21.4 PRICE SCHEDULE Item No. 0021BB and 1021BB Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0021BB and 1021BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.22 The Dalles Project

##### 1.3.22.1 PRICE SCHEDULE Item No. 0022AA and 1022AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of The Dalles Pelton main unit Kaplan governor



retrofit equipment will be made at the unit price under Line Item 0022AA and 1022AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.22.2 PRICE SCHEDULE Item No. 0022AB and 1022AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0022AB and 1022AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.22.3 PRICE SCHEDULE Item No. 0022BA and 1022BA Furnish Pelton Fish Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of The Dalles Pelton fish unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0022BA and 1022BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.22.4 PRICE SCHEDULE Item No. 0022BB and 1022BB Furnish Pelton Fish Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0022BB and 1022BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.22.5 PRICE SCHEDULE Item No. 0022CA and 1022CA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of The Dalles Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0022CA and 1022CA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.22.6 PRICE SCHEDULE Item No. 0022CB and 1022CB Furnish Woodward Main Unit Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0022CB and 1022CB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.23 John Day Project

1.3.23.1 PRICE SCHEDULE Item No. 0023AA and 1023AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of John Day Pelton main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0023AA and 1023AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.23.2 PRICE SCHEDULE Item No. 0023AB and 1023AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0023AB and 1023AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.24 Big Cliff Project

1.3.24.1 PRICE SCHEDULE Item No. 0024AA and 1024AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Big Cliff Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0024AA and 1024AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.24.2 PRICE SCHEDULE Item No. 0024AB and 1024AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0024AB and 1024AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and

deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.25 Cougar Project

##### 1.3.25.1 PRICE SCHEDULE Item No. 0025AA and 1025AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Cougar Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0025AA and 1025AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.25.2 PRICE SCHEDULE Item No. 0025AB and 1025AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0025AB and 1025AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.26 Detroit Project

##### 1.3.26.1 PRICE SCHEDULE Item No. 0026AA and 1026AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Detroit Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0026AA and 1026AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.26.2 PRICE SCHEDULE Item No. 0026AB and 1026AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0026AB and 1026AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

### 1.3.27 Dexter Project

#### 1.3.27.1 PRICE SCHEDULE Item No. 0027AA and 1027AA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Dexter Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0027AA and 1027AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

#### 1.3.27.2 PRICE SCHEDULE Item No. 0027AB and 1027AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0027AB and 1027AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

### 1.3.28 Foster Project

#### 1.3.28.1 PRICE SCHEDULE Item No. 0028AA and 1028AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Foster Pelton main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0028AA and 1028AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

#### 1.3.28.2 PRICE SCHEDULE Item No. 0028AB and 1028AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0028AB and 1028AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

### 1.3.29 Green Peter Project

#### 1.3.29.1 PRICE SCHEDULE Item No. 0029AA and 1029AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Green Peter Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0029AA

and 1029AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.29.2 PRICE SCHEDULE Item No. 0029AB and 1029AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0029AB and 1029AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.29.3 PRICE SCHEDULE Item No. 0029BA and 1029BA Furnish Woodward Fish Unit Governor Retrofit Equipment - Francis

Payment for each lot of Green Peter Woodward fish unit Francis governor retrofit equipment will be made at the unit price under Line Item 0029BA and 1029BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.29.4 PRICE SCHEDULE Item No. 0029BB and 1029BB Furnish Woodward Fish Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0029BB and 1029BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.30 Hills Creek Project

1.3.30.1 PRICE SCHEDULE Item No. 0030AA and 1030AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Hills Creek Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0030AA and 1030AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.30.2 PRICE SCHEDULE Item No. 0030AB and 1030AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0030AB and 1030AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.31 Lookout Point Project

1.3.31.1 PRICE SCHEDULE Item No. 0031AA and 1031AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Lookout Point Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0031AA and 1031AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.31.2 PRICE SCHEDULE Item No. 0031AB and 1031AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0031AB and 1031AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.32 Lost Creek Project

1.3.32.1 PRICE SCHEDULE Item No. 0032AA and 1032AA Furnish Pelton Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Lost Creek Pelton main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0032AA and 1032AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.32.2 PRICE SCHEDULE Item No. 0032AB and 1032AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0032AB and 1032AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and

deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.33 McNary Project

##### 1.3.33.1 PRICE SCHEDULE Item No. 0033AA and 1033AA Furnish Pelton Station Service Unit Governor Retrofit Equipment - Francis

Payment for each lot of McNary Pelton station service unit Francis governor retrofit equipment will be made at the unit price under Line Item 0033AA and 1033AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.33.2 PRICE SCHEDULE Item No. 0033AB and 1033AB Furnish Pelton Station Service Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0033AB and 1033AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

##### 1.3.33.3 PRICE SCHEDULE Item No. 0033BA and 1033BA Furnish Allis-Chalmers Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of McNary Allis-Chalmers main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0033BA and 1033BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.33.4 PRICE SCHEDULE Item No. 0033BB and 1033BB Furnish Allis-Chalmers Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0033BB and 1033BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

##### 1.3.33.5 PRICE SCHEDULE Item No. 0033CA and 1033CA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of McNary Woodward main unit Kaplan governor retrofit

equipment will be made at the unit price under Line Item 0033CA and 1033CA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.33.6 PRICE SCHEDULE Item No. 0033CB and 1033CB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0033CB and 1033CB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.34 Ice Harbor Project

1.3.34.1 PRICE SCHEDULE Item No. 0034AA and 1034AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Ice Harbor Pelton main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0034AA and 1034AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.34.2 PRICE SCHEDULE Item No. 0034AB and 1034AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0034AB and 1034AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.34.3 PRICE SCHEDULE Item No. 0034BA and 1034BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Ice Harbor Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0034BA and 1034BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)



1.3.34.4 PRICE SCHEDULE Item No. 0034BB and 1034BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0034BB and 1034BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.35 Lower Monumental Project

1.3.35.1 PRICE SCHEDULE Item No. 0035AA and 1035AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Lower Monumental Pelton main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0035AA and 1035AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.35.2 PRICE SCHEDULE Item No. 0035AB and 1035AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0035AB and 1035AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.35.3 PRICE SCHEDULE Item No. 0035BA and 1035BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Lower Monumental Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0035BA and 1035BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.35.4 PRICE SCHEDULE Item No. 0035BB and 1035BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0035BB and 1035BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting

Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.36 Little Goose Project

##### 1.3.36.1 PRICE SCHEDULE Item No. 0036AA and 1036AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Little Goose Pelton main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0036AA and 1036AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.36.2 PRICE SCHEDULE Item No. 0036AB and 1036AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0036AB and 1036AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

##### 1.3.36.3 PRICE SCHEDULE Item No. 0036BA and 1036BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Little Goose Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0036BA and 1036BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

##### 1.3.36.4 PRICE SCHEDULE Item No. 0036BB and 1036BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0036BB and 1036BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

#### 1.3.37 Lower Granite Project

##### 1.3.37.1 PRICE SCHEDULE Item No. 0037AA and 1037AA Furnish Pelton Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Lower Granite Pelton main unit Kaplan governor

retrofit equipment will be made at the unit price under Line Item 0037AA and 1037AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.37.2 PRICE SCHEDULE Item No. 0037AB and 1037AB Furnish Pelton Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0037AB and 1037AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.37.3 PRICE SCHEDULE Item No. 0037BA and 1037BA Furnish Woodward Main Unit Governor Retrofit Equipment - Kaplan

Payment for each lot of Lower Granite Woodward main unit Kaplan governor retrofit equipment will be made at the unit price under Line Item 0037BA and 1037BA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.37.4 PRICE SCHEDULE Item No. 0037BB and 1037BB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0037BB and 1037BB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.38 Dworshak Project

1.3.38.1 PRICE SCHEDULE Item No. 0038AA and 1038AA Furnish Woodward Main Unit Governor Retrofit Equipment - Francis

Payment for each lot of Dworshak Woodward main unit Francis governor retrofit equipment will be made at the unit price under Line Item 0038AA and 1038AA. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, manufacture, assemble, test, and deliver the retrofit equipment in conformance to the specifications to the destination address. Payment will be made when delivered to the installation site, inspected, and accepted by the government. (SEC 26 00 10.00 25)

1.3.38.2 PRICE SCHEDULE Item No. 0038AB and 1038AB Furnish Woodward Main Unit Governor Operation and Maintenance Manuals

Payment for the lot of Operation and Maintenance Manuals will be made at the unit price under Line Item 0038AB and 1038AB. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to produce the manuals in conformance to the specifications and deliver them to the destination address. Payment will be made when the Operation and Maintenance Manual has been approved by the Contracting Officer, and all required copies have been received at the Installation Site. (SEC 01 30 60.00 25, SEC 01 33 00, SEC 26 00 10.00 25)

1.3.39 PRICE SCHEDULE Item No. 0039 and 1039 Control Room Human-Machine Interface (HMI)

Payment for each Control Room Human-Machine Interface (HMI) will be made separately at the unit price under Line Item 0039 and 1039. Price and Payment shall constitute full compensation for all labor, materials, and equipment required to procure, configure, and deliver the HMI along with the programming software, manuals, cables and the required communications cabling and media convertors as specified to the destination address. Payment will be made after acceptance by the Government. (SEC 26 00 10.00 25)

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

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## SECTION 01 30 60.00 25

### OPERATIONS AND MAINTENANCE DATA

#### PART 1 GENERAL

##### 1.1 GENERAL INFORMATION

###### 1.1.1 Coverage

The Operations and Maintenance (O&M) Manual for the equipment supplied under these Specifications shall cover the new Retrofit equipment and the interface between the retained existing governor equipment. For specific software information to be included, refer to SECTION 26 00 10.00 25.

###### 1.1.2 Material

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 specifically prepared for this work. Standard manufacturer's information used shall be clearly marked to indicate what is applicable and what is not applicable. The parts catalogs and operating instructions shall cover all equipment furnished under this contract. The O&M Manual furnished shall include under a separate tab complete identification of the spare parts furnished in compliance with the requirements of these specifications.

###### 1.1.3 Format

Submit two draft copies of the Initial Operations and Maintenance Data in hard-copy format. After the hard-copy manuals are approved, submit four hard-copy versions of the Manual, and 6 DVD copies in electronically readable format. The DVD copies of the Manual must have material identical to that contained in the hard-copy versions furnished, and be readable on Windows-based machines in common use at Corps of Engineers Offices. DVDs shall be searchable by MS Word editor, and if drawings are included the drawings shall be in 'pdf' format.

###### 1.1.4 Manual Organization

###### 1.1.4.1 Binding

Binders shall be side binding, telescoping-post, expandable-back type, and shall have a supported vinyl cover, blue in color, with a stiff binder board for sheet size A (8-1/2 x 11 inches). Ring-type loose-leaf binders will not be acceptable. One sheet size B, (11 x 17 inches) copy of each of the drawings approved under this contract 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. All standard catalog cuts, manufacturer's printed data or descriptive literature, parts sheets, illustrations, etc., shall be either original manufacturer sheets or reproduced copies of equal clarity and durability. The following identification shall be inscribed on the covers in gold colored lettering:

- a. The words "OPERATIONS AND MAINTENANCE MANUAL".

- b. The name and location of the project.
- c. The volume number and total number of volumes.
- d. The systems and/or equipment therein.
- e. The name of the Contractor.
- f. The contract number.
- g. The year of completion of the contract.

#### 1.1.4.2 Tables of Contents

Each manual shall contain a master table of contents. The master table of contents shall contain all chapters, appendices, 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, appendices, and/or indexes. All chapters, appendices, and indexes shall be adequately separated and identified by standard line indexes.

#### 1.1.5 Contracting Officer

"Contracting Officer", when used in this Section, shall be construed to mean either the Contracting Officer (CO), or his authorized Representative (COR).

#### 1.2 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 01 33 00 SUBMITTAL PROCEDURES:

##### SD-10 Operation and Maintenance Data

###### Initial Operations and Maintenance Data; G, HDC

Two complete draft copies of the Initial Submittal of Operations and Maintenance Data shall be made in hard-copy format not less than 45 calendar days prior to delivery of the equipment. The Contracting Officer will return one draft copy with appropriate approval of, or comment on, the acceptability of the submittal. As directed by the Contracting Officer, The Contractor shall resubmit the one draft copy with such corrected and/or additional data sheets and drawings. One copy of each revised data sheet and drawings shall be furnished also for each remaining draft copy retained by the reviewing authority.

###### Final Submittal of Operations and Maintenance Data; G, HDC

After final approval of the Operations and Maintenance Data, furnish the required number of copies to the address shown in the Task Order for O&M Manual delivery.

## PART 2 PRODUCTS

### 2.1 Order of Material

Material contained in the O&M Manual shall appear in the order shown in this part.

#### 2.1.1 Index

The Operation and Maintenance (O&M) Manual shall have an index of its contents listing each volume, tab numbers, etc., as necessary to allow ready reference to a particular operating or maintenance instruction or drawing. Rigid tabbed fly leaf sheets shall be provided for each separate product and/or piece of equipment under each Governor system. All pages shall be numbered with the referenced number included in the index.

#### 2.1.2 Operating Instructions

The operation data shall include specific operating instructions, functional description of operating parts, and special precautions or procedures to be considered. The data shall include the following, as applicable:

- (1) Check List Prior to Start Up. Precautions and prechecks prior to start up of equipment and/or system, including safety devices, monitoring devices and control sequence, shall be provided.
- (2) Start Up and Operation. Step-by-step sequential procedures for start up and normal operation checks for satisfactory operation shall be provided. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the operating instructions and flagged for the attention of the operator. Procedures shall include test, manual or normal, and automatic modes.
- (3) Shutdown. Procedures for normal and emergency shutdown of equipment and/or systems shall be provided. The instructions shall include any procedures necessary for placing the equipment and/or system on standby or preparing the equipment and/or system for start up at a later time. Procedures shall include test, manual or normal, and automatic modes.
- (4) Normal Operating Conditions. A tabular listing of the normal operating conditions of each individual component, including the settings, operating temperature, valve conditions, etc.

#### 2.1.3 Maintenance Procedures

##### 2.1.3.1 General

Maintenance procedures recommended shall be designed for execution by Government employees who are competent and qualified to perform maintenance on the existing governor equipment before the retrofit installation. If the complete governor system resulting from the retrofit installation requires special maintenance procedures different from those for the original governor equipment, the differences shall be clearly set forth and explained. These procedures shall indicate preventive maintenance, lubrication, and good housekeeping practices which should be performed by



operating personnel as well as more complex maintenance procedures which would normally be performed by trained maintenance personnel only.

#### 2.1.3.2 Maintenance Schedule

Maintenance procedures shall be presented with a schedule indicating time frames or operating hours for specific maintenance to be accomplished, including manufacturer's recommended major maintenance requirements. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the maintenance procedures and flagged for the attention of personnel.

#### 2.1.3.3 Operating Modes

Maintenance procedures shall include necessary operating instructions for taking equipment off line, putting equipment on line, or putting equipment on standby.

#### 2.1.3.4 Operator Preventive Maintenance and Adjustments

The O&M instructions shall include recommended operator preventive maintenance which would normally be performed by operating personnel, and procedures necessary for entering or adjusting Governor control parameters for turbine-generator operation. Provide recommended Schedules indicating time frames or operating hours for initiating operator maintenance and adjustments. Emergency adjustments shall be included and flagged for operator's attention; the instructions shall also include procedures for emergency repairs that could be performed by operating personnel. These emergency repairs or "trouble-shooting guides" shall be outlined in three columns with the following headings:

Column 1 - Trouble

Column 2 - Probable Cause(s)

Column 3 - Correction

#### 2.1.3.5 Maintenance Procedures

Maintenance instructions shall include all necessary material, equipment, and system data to perform maintenance work and shall include, but not be limited to:

Manufacturers bulletins, catalogs, and descriptive data;

Certified performance curves, copies of approved test plans, including logs and records of performance acceptance test results, and actual adjustments made during final acceptance and inspection;

Governor system layouts, including block diagrams, wiring, control, and isometric diagrams;

Description of Governor components, including relationships with other system components;

Schematic and wiring diagrams of the Governor;

List of software symbols used, their definitions;

Input/Output points list, software symbol, or tag, of each point;

Diagram of each logic block;

Software listings;

Instructions for use of Software Development Suite furnished in making logic modifications to Governor software, and making software additions;

Instructions for connections to future powerplant Control System;

A list of any special tools required.

Text

#### 2.1.4 Governor Component Descriptions

Narrative and technical descriptions of each Governor component and of its interrelation with other components.

#### 2.1.5 Catalog Data Sheets

Catalog data sheets for all new Governor equipment furnished shall be provided. Standard catalog data sheets will not be acceptable unless irrelevant parts are marked out (with distinct black "X") and relevant parts clearly identified. Any data on catalog sheets which does not directly relate to equipment being furnished 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. Catalog data sheets shall be clearly identified by:

(1) Part Name. A clear and descriptive name shall be given to each component in the piece of equipment.

(2) Manufacturer and Part Number. The name, address, and telephone number of the manufacturer shall be given along with the catalog part number.

#### 2.1.6 Spare Parts Listing

The spare parts listing shall be inserted at a separate tab following the catalog data sheets. This tab shall be for spare parts listing only. 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:

(1) Part Name. A clear and descriptive name shall be given to each component listed as a spare part in the piece of equipment.

(2) Manufacturer and Part Number. The name, address, and telephone number of the manufacturer shall be given along with the catalog part number.

(3) Quantity. The quantity of each part listed as a spare part shall be given.

(4) Reference to Catalog Data Sheets. Each spare part shall be referenced to the corresponding catalog data sheet by page number.

(5) Price.

#### 2.1.1.7 Drawings

One 11- by 17-inch copy of each of the drawings approved under this contract shall be furnished and shall be folded and bound into the hard-copy manuals for easy unfolding without removal from the binder. Each sheet shall be numbered and an index provided for ready reference to the data. All standard catalog cuts, manufacturer's printed data or descriptive literature, parts sheets, illustrations, etc., shall be either original manufacturer sheets or reproduced copies of equal clarity and durability. Readability and clarity requirements apply equally to the DVD versions of manuals.

Shop assembly or special drawings shall be of a size that requires folding only in left to right coordinate. (11" X 17" maximum, 8-½" X 11" minimum) Each sheet shall be numbered and listed in the O&M Manual index.

### PART 3 EXECUTION

#### 3.1 SPECIFIC REQUIREMENTS

One copy of each Operation and Maintenance (O&M) Manual shall contain all original versions of standard catalog cuts, manufacturer's data, parts sheets, and illustrations. All other copies shall be readable; non-permanent or non-water-resistant copies are not acceptable. All nonapplicable data such as description of other models, optional equipment not included, etc. shall be marked out. If reference is made to other drawings or data, the referenced drawings or data shall be included. The O&M data shall list equipment covered; the manufacturer; and name, address, and telephone number of the local representative nearest the Installation Site.

Upon "Final" approval of the two draft copies of the Operations and Maintenance Data, submit to the reviewing authority named in the Task Order two additional hard copies and 6 additional DVD copies for a total of four hard-copies and six DVD copies. All copies of the [Final Submittal of Operations and Maintenance Data](#) shall be furnished no later than the date specified for delivery of the equipment.

-- End of Section --

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SECTION 01 33 00

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## SECTION 01 33 00

### SUBMITTAL PROCEDURES

#### PART 1 GENERAL

##### 1.1 DEFINITION

###### 1.1.1 Submittal

Contract Clauses 52.236-5, MATERIAL AND WORKMANSHIP, paragraph (b) and 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, paragraphs (d), (e), and (f) apply to all "submittals."

###### 1.1.2 Submittal Destination Addresses

Submittal destination addresses will be included with each Task Order issued under the Contract resulting from this solicitation. Submittal destination addresses may differ according to the Project but submittal quantities and other requirements remain unaffected.

###### 1.1.3 Submittal Descriptions (SD)

###### SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

Drawings prepared by the Contractor showing the complete system, or details of the complete system, including wiring diagrams, hydraulic system diagrams.

###### SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrations size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

###### SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the product.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to the job (installation) site.

Report which includes finding of a test made at the job (installation) site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily checklists.

Final acceptance test and operational test procedure.

#### SD-07 Certificates

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

#### SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards, and safety precautions.

#### SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's Erection Engineer to confirm compliance with referenced Standards, manufacturer's standards, or instructions.

#### SD-10 Operation and Maintenance Data

Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

#### SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

### 1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

#### 1.2.1 Government Approved

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and

Drawings for Construction," they are considered to be "Shop Drawings."

#### 1.2.2 Information Only

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

#### 1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

#### 1.4 DISAPPROVED SUBMITTALS

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

#### 1.5 WITHHOLDING OF PAYMENT

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

#### 1.6 GENERAL

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

## 1.7 SUBMITTAL REGISTER

The Contractor shall maintain a submittal register for the project. The Government will provide the initial submittal register, located in Section J as Attachment J1, in electronic format after award. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall track all submittals.

## 1.8 SCHEDULING

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

## 1.9 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) located in Section J as Attachment No. J2 shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

## 1.10 SUBMITTAL PROCEDURES

Submittals shall be made as follows:

### 1.10.1 "Shop Drawings" Procedures

The procedure for "shop drawings" shall be as follows:

a. "Shop Drawings" Approved by Contractor. All "shop drawings" submittals shall be reviewed and corrected to make them complete and in accordance with the contract. Approval shall be indicated on each drawing by an "Approved" stamp as shown in paragraph 1.14. Names and titles of individuals authorized by the Contractor to approve drawings shall be provided prior to any submission. All shop drawings shall be submitted as indicated herein. Submittals which are not required to be approved by the Government ("information only") will be monitored and spot-checks will be made. When such checks indicate noncompliance, the Contractor will be notified by the same method used for Government approvals.

b. "Shop Drawings" Approved by the Government. Before submission the Contractor shall review and approve all "shop drawings" prepared by subcontractors, suppliers, and the Contractor for completeness and compliance with plans and specifications, and shall so certify by stamp on each drawing or item of printed material. (Red markings are reserved for the Government.) Suppliers or subcontractors certifications are not acceptable as meeting this requirement.



Submittals will be reviewed and processed as follows: NOTE: The following action codes are to further define only the referenced codes on the reverse side of ENG Form 4025.

(1) Action Code A (Approved as Submitted). Shop drawings which can be approved without correction will be stamped "Approved" and one reproducible, or two copies of catalog and other printed data, will be returned to the Contractor.

(2) Action Code B (Approved, Except as Noted, Resubmission Not Required). Shop drawings which have only minor discrepancies will be corrected and stamped "Approved as Corrected" or "Except as Noted." Corrections will be identified. Distribution will be same as for "Approved" drawings.

(3) Action Code C (Approved, Except as Noted, Resubmission Required). Two prints of shop drawings which are incomplete or require more than minor corrections will be marked in red to indicate necessary corrections. One marked copy will be returned to the Contractor stamped "Returned for Correction." Transparencies of such drawings will be destroyed.

(4) Action Code E (Disapproved). One print of shop drawings which are fundamentally in error, cover wrong equipment or construction, or require extensive corrections will be returned to the Contractor stamped "Disapproved." An explanation will be furnished on the print or on ENG Form 4025 indicating reason for disapproval. Transparencies of such drawings will be destroyed.

c. "Shop Drawing Resubmittal". Resubmittal will not be required for drawings with Action Code A or B unless subsequent changes are made by the Contractor or by a contract modification. For drawings with Action Code C or E, corrections required shall be made, any changes shall be noted by dating the revisions to correspond with the change request date, and the drawings shall be promptly resubmitted for review. Government costs incurred after the first resubmittal will be charged to the Contractor.

#### 1.10.2 "Shop Drawings" Submittal

##### 1.10.2.1 General

ENG Form 4025 shall be in five (5) copies used for transmitting "shop drawings" submittals. Each submittal requiring Government approval, five copies; and for information only, three copies, shall be listed separately naming subcontractor, supplier, or manufacturer, specification paragraph number(s), drawing/sheet number(s), pay item number, and any other information needed to identify the item, define its use, and locate it in the work. Each submittal shall be complete containing all information needed to determine contract compliance.

##### 1.10.2.2 Drawings

a. Each drawing shall be not more than 28 inches high by 40 inches wide, with a title block in lower right hand corner and a 3 inch wide by 4 inch high clear area adjacent to the title block. The title block shall contain the subcontractor's or fabricator's name, contract number, description of item(s), CLIN number, and a revision block. A blank margin of 3/4 inch at bottom, 2 inches at

left, and 1/2 inch at top and right shall be provided.

b. Three copies on plain bond paper shall be provided, along with electronic drawing files in an approved Computer Aided Design/Drafting (CADD) format discussed in paragraph 1.10.2.3 below. These shall be submitted along with the final drawing revision.

c. Separate drawings are required for each bid item. 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.

d. The information shall be complete and the sequence of drawing submittal shall be 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. All revisions after initial submittal shall be shown by number, date, and subject in revision block. Any drawing or electronic drawing file submitted that is not of satisfactory quality will be returned without action.

#### 1.10.2.3 Shop Drawing Reproducibles

Upon completion of the work under each Task Order, the Contractor shall furnish a complete set of files for MicroStation version 8 for all the drawings as finally approved under this contract recorded on CD ROM's. Furnish two copies of each CD ROM. These files shall show the drawings with all changes and revisions, including any field changes, made up to the time that the equipment is completed and accepted. In addition, the Contractor shall furnish a complete set of reproducibles of the drawings. The reproducibles shall be no larger than 28 inches high by 40 inches wide, of such quality and clarity as to permit sharp and thoroughly legible microfilm copying, and shall show all revisions, including field changes, up to the time that the equipment is accepted. The reproducibles shall be on permanent translucent, matte-surface two sides, polyester base film of at least 0.004" thickness. The tracings shall be identical to the drawings as recorded on the CD ROMs.

#### 1.10.3 Deviations

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

#### 1.10.4 Other Submittals

All requirements for "shop drawings" under paragraphs 1.10.2.1 and 1.10.2.2 shall apply to catalog cuts, illustrations, printed specifications, or other data submitted except that five copies for Government approval and three copies for information only shall be submitted. Submittals shall be made on 8 1/2- by 11-inch paper or when appropriate as a drawing not larger than 28 inches high by 40 inches wide. Inapplicable portions shall be marked out and applicable items such as model numbers, sizes, and accessories shall be indicated. Decisions on

these other submittals will be given in accordance with paragraph Government Approved Submittals. For each item listed separately, the name of the subcontractor, supplier, or manufacturer, the specification paragraph number(s), drawing/sheet number(s), pay item number, and any other information needed to identify the item, define its use, and locate it in the work shall be provided. Each submittal shall be complete containing all information needed to determine contract compliance.

#### 1.10.5 Submittal Format

a. In general, submittal requirements will be three hard copies and one electronic copy; electronic format of drawings shall be compatible with Bentley Microstation Version 8. Drawing prints shall be either blue or black line permanent-type prints on a white background or blueprint and shall be sufficiently clear and suitable for making legible copies. Submittals other than drawings have varying submittal requirements as set forth in the pertinent Specification section.

b. Submit three copies of all catalog and descriptive data. Catalog cuts and other descriptive data which have more than one model, size, or type or which shows optional equipment shall be clearly marked to show the model, size, or type and all optional equipment which is proposed for approval. Submittals on component items forming a system or that are interrelated shall be submitted at one time as a single submittal in order to demonstrate that the items have been properly coordinated and will function as a unit.

#### 1.11 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register" ENG Form 4288.

#### 1.12 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. All but one copy of the submittal will be retained by the Contracting Officer and the remaining copy will be returned to the Contractor.

#### 1.13 INFORMATION ONLY SUBMITTALS

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

#### 1.14 STAMPS

Stamps used by the Contractor on the submittal data to certify that the

submittal meets contract requirements shall be similar to the following:

CONTRACTOR  (Firm Name)
  _____ Approved
  _____ Approved with corrections as noted on submittal data and/or attached sheets(s) .
  SIGNATURE: _____
TITLE: _____
DATE: _____

#### 1.15 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in the original and two copies. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

#### 1.16 CONTRACTOR'S FILES

"Approved" and "Approved as Corrected" (Action Codes A and B) drawing files shall be maintained in fabrication shops and at field sites by the Erection Engineer for Government and Installation Contractor use.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

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-- End of Section Table of Contents --

## SECTION 01 42 00

### SOURCES FOR REFERENCE PUBLICATIONS

#### PART 1 GENERAL

##### 1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

##### 1.2 ORDERING INFORMATION

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

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS)  
1200 G Street, NW, Suite 500  
Washington, D.C. 20005  
Ph: 202-628-6380  
Fax: 202-393-5453  
Internet: <http://www.atis.org>

ALUMINUM ASSOCIATION (AA)  
National Headquarters  
1525 Wilson Boulevard, Suite 600  
Arlington, VA 22209  
Ph: 703-358-2960  
Fax: 703-358-2961  
Internet: <http://www.aluminum.org>

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)  
2025 M Street, NW, Suite 800  
Washington, DC 20036  
Ph: 202-367-1155  
Fax: 202-367-2155  
E-mail: [info.abma@smithbucklin.com](mailto:info.abma@smithbucklin.com)  
Internet: <http://www.abma-dc.org>

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)  
8221 Old Courthouse Road Suite 207  
Vienna, VA 22182  
Ph: 703-356-7172  
Fax: 703-356-4543  
Internet: <http://www.abma.com>

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)  
1330 Kemper Meadow Drive  
Cincinnati, OH 45240  
Ph: 513-742-2020  
Fax: 513-742-3355  
E-mail: mail@acgih.org  
Internet: <http://www.acgih.org>

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)  
2700 Prosperity Ave., Suite 250  
Fairfax, VA 22031  
Tel: 703-849-8888  
Fax: 703-207-3561  
E-mail: infonet@aiha.org  
Internet: <http://www.aiha.org>

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)  
One East Wacker Drive  
Chicago, IL 60601-1802  
Ph: 312-670-2400  
Fax: 312-670-5403  
Publications: 800-644-2400  
E-mail: pubs@aisc.org  
Internet: <http://www.aisc.org>

AMERICAN IRON AND STEEL INSTITUTE (AISI)  
1140 Connecticut Avenue, NW, Suite 705  
Washington, DC 20036  
Ph: 202-452-7100  
Fax: 202-463-6573  
Internet: <http://www.steel.org>

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)  
1819 L Street, NW, 6th Floor  
Washington, DC 20036  
Ph: 202-293-8020  
Fax: 202-293-9287  
E-mail: info@ansi.org  
Internet: <http://www.ansi.org/>

--- ANSI documents beginning with the letter "S" can be ordered from:

Acoustical Society of America (ASA)  
2 Huntington Quadrangle, Suite 1N01  
Melville, NY 11747-4502  
Ph: 516-576-2360  
Fax: 516-576-2377  
E-mail: asa@aip.org  
Internet: <http://asa.aip.org>

AMERICAN PETROLEUM INSTITUTE (API)  
1220 L Street, NW  
Washington, DC 20005-4070  
Ph: 202-682-8000  
Fax: 202-682-8223  
Internet: <http://www.api.org>

AMERICAN PUBLIC HEALTH ASSOCIATION (APHA)  
800 I Street, NW  
Washington, DC 20001  
Ph: 202-777-2742  
Fax: 202-777-2534  
E-mail: [comments@apha.org](mailto:comments@apha.org)  
Internet: <http://www.apha.org>

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)  
1711 Arlingate Lane  
P.O. Box 28518  
Columbus, OH 43228-0518  
Ph: 800-222-2768; 614-274-6003  
Fax: 614-274-6899  
E-mail: [webmaster@asnt.org](mailto:webmaster@asnt.org)  
Internet: <http://www.asnt.org>

AMERICAN SOCIETY FOR QUALITY (ASQ)  
600 North Plankinton Avenue  
Milwaukee, WI 53203  
-or-  
P.O. Box 3005  
Milwaukee, WI 53201-3005  
Ph: 800-248-1946; 414-272-8575  
Fax: 414-272-1734  
E-mail: [cs@asq.org](mailto:cs@asq.org) or [help@asq.org](mailto:help@asq.org)  
Internet: <http://www.asq.org>

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)  
1800 East Oakton Street  
Des Plaines, IL 60018-2187  
Ph: 847-699-2929  
Fax: 847-768-3434  
E-mail: [customerservice@asse.org](mailto:customerservice@asse.org)  
Internet: <http://www.asse.org>

AMERICAN WELDING SOCIETY (AWS)  
550 N.W. LeJeune Road  
Miami, FL 33126  
Ph: 800-443-9353 - 305-443-9353  
Fax: 305-443-7559  
E-mail: [info@aws.org](mailto:info@aws.org)  
Internet: <http://www.aws.org>

ASM INTERNATIONAL (ASM)  
9639 Kinsman Road  
Materials Park, OH 44073-0002  
Ph: 440-338-5151  
Fax: 440-338-4634  
E-mail: [cust-srv@asminternational.org](mailto:cust-srv@asminternational.org)  
Internet: <http://www.asm-international.org>

ASME INTERNATIONAL (ASME)  
Three Park Avenue, M/S 10E  
New York, NY 10016  
Ph: 212-591-7722 or 800-843-2763  
Fax: 212-591-7674  
E-mail: [infocentral@asme.org](mailto:infocentral@asme.org)  
Internet: <http://www.asme.org>



ASSOCIATION FOR IRON AND STEEL TECHNOLOGY (AIST)  
186 Thorn Hill Road  
Warrendale, PA 15086-7528  
Ph: 724-776-6040  
Fax: 724-776-1880  
E-Mail: [info@aistech.org](mailto:info@aistech.org)  
Internet: <http://www.aistech.org>

ASSOCIATION FOR IRON AND STEEL TECHNOLOGY (AIST) (FORMERLY: IRON & STEEL SOCIETY (ISS))  
186 Thorn Hill Road  
Warrendale, PA 15086-7528  
Ph: 724-776-6040  
Fax: 724-776-1880  
E-Mail: [info@aistech.org](mailto:info@aistech.org)  
Internet: <http://www.aistech.org>

ASTM INTERNATIONAL (ASTM)  
100 Barr Harbor Drive, P.O. Box C700  
West Conshohocken, PA 19428-2959  
Ph: 610-832-9500  
Fax: 610-832-9555  
E-mail: [service@astm.org](mailto:service@astm.org)  
Internet: <http://www.astm.org>

CONCRETE SAWING AND DRILLING ASSOCIATION (CSDA)  
11001 Danka Way North, Suite 1  
St Petersburg, FL 33716  
PH: 727-577-5004  
Fax: 727-577-5012  
E-mail: [info@csda.org](mailto:info@csda.org)  
Internet: <http://www.csda.org>

ELECTRONIC INDUSTRIES ALLIANCE (EIA)  
2500 Wilson Boulevard  
Arlington, VA 22201-3834  
Ph: 703-907-7500  
Fax: 703-907-7501  
Internet: <http://www.eia.org>

U.S. DEPARTMENT OF ENERGY (DOE)  
1000 Independence Ave. SW  
Washington, DC 20585  
Ph: 800-342-5363  
Fax: 202-586-4403  
E-mail: [dmteam@hq.doe.gov](mailto:dmteam@hq.doe.gov)  
Internet: <http://www.eh.doe.gov/>

ETL TESTING LABORATORIES (ETL)  
Intertek Testing Services, ETL SEMKO  
70 Codman Hill Road  
Boxborough, MA 01719  
Ph: 978-263-2662  
Fax: 978-263-7086  
E-mail: [info@etlsemko.com](mailto:info@etlsemko.com)  
Internet: <http://www.etlsemko.com>

EUROPEAN COMMITTEE FOR STANDARDIZATION (CEN/CENELEC)  
CEN Management Centre  
36, rue de Stassart  
B-1050 Brussels  
Ph: 32-2-550-08-11  
Fax: 32-2-550-08-19  
E-mail: [infodesk@cenorm.be](mailto:infodesk@cenorm.be)  
Internet: <http://www.cenorm.be>

FEDERAL ENERGY REGULATORY COMMISSION (FERC)  
888 First Street, NE  
Washington, DC 20426  
Ph: 202-502-6088  
E-mail: [customer@ferc.gov](mailto:customer@ferc.gov)  
Internet: <http://www.ferc.gov/default.asp>

FLUID CONTROLS INSTITUTE (FCI)  
1300 Sumner Avenue  
Cleveland, OH 44115  
Ph: 216-241-7333  
Fax: 216-241-0105  
E-mail: [fcifluidcontrolsinstitute.org](mailto:fcifluidcontrolsinstitute.org)  
Internet: [www.fluidcontrolsinstitute.org](http://www.fluidcontrolsinstitute.org)

HYDRAULIC INSTITUTE (HI)  
9 Sylvan Way  
Parsippany, NJ 07054-3802  
Ph: 973-267-9700  
Fax: 973-267-9055  
E-mail: [webmaster@pumps.org](mailto:webmaster@pumps.org)  
Internet: <http://www.pumps.org>

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)  
1901 North Moore Street  
Arlington, VA 22209-1762  
Ph: 703-525-1695  
Fax: 703-528-2148  
E-mail: [isea@safetyequipment.org](mailto:isea@safetyequipment.org)  
Internet: <http://www.safetyequipment.org/>

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)  
445 Hoes Lane  
Piscataway, NJ 08855-1331  
Ph: 732-981-0060  
Fax: 732-981-1712  
E-mail: [customer-services@ieee.org](mailto:customer-services@ieee.org)  
Internet: <http://www.ieee.org>

INSULATED CABLE ENGINEERS ASSOCIATION (ICEA)  
P.O. Box 1568  
Carrollton, GA 30112  
Ph: 770-830-0369  
Fax: 770-830-8501  
Internet: <http://www.icea.net>

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)  
3, rue de Varembe, P.O. Box 131  
CH-1211 Geneva 20, Switzerland  
Ph: 41-22-919-0211

Fax: 41-22-919-0300  
E-mail: [custserv@iec.ch](mailto:custserv@iec.ch)  
Internet: <http://www.iec.ch>

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)  
1, rue de Varembe'  
Case Postale 56  
CH-1211 Geneve 20 Switzerland  
Ph: 41-22-749-0111  
Fax: 41-22-733-3430  
E-mail: [central@iso.ch](mailto:central@iso.ch)  
Internet: <http://www.iso.ch>

INTERNATIONAL TELECOMMUNICATION UNION (ITU)  
For documents not available from Dept of Commerce:  
Sales Service  
International Telecommunication Union  
Place des Nations  
CH-1211 Geneve 20 Switzerland  
Ph: 41-22-730-5111  
Fax: 41-22-733-7256  
E-mail: [itumail@itu.int](mailto:itumail@itu.int)  
Internet: <http://www.itu.org>

For documents available from Dept of Commerce:  
U.S. Dept of Commerce  
National Technical Information Service (NTIS)  
5285 Port Royal Road  
Springfield, VA 22161  
Ph: 703-605-6585  
FAX: 703-605-6887  
E-mail: [info@ntis.gov](mailto:info@ntis.gov)  
Internet: <http://www.ntis.gov>

IPI - ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES (IPC)  
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MISCELLANEOUS ELECTRICAL EQUIPMENT AND WORK

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers miscellaneous electrical work for furnishing the Governor control retrofit equipment for existing hydroelectric turbine Governors specified in SECTION 26 00 10.00 25. Work includes but is not limited to: providing the electrical equipment and connections, conduit, power and control wiring internal to the governor equipment furnished. Site installation work is not included in these specifications.

1.2 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.

ASTM INTERNATIONAL (ASTM)

- |            |  |
|------------|--|
| ASTM A 123 | (2002) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A 153 | (2005) Zinc Coating (Hot-Dip) on Iron and Steel Hardware             |

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

- |          |   |
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| IEEE 383 | (2003) Standard for qualifying Class 1E Electrical Cables and Field Splices for Nuclear Power Generating Stations |
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NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

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| NEMA 250   | (2003) Enclosures for Electrical Equipment (1000 Volts Maximum)   |
| NEMA C80.1 | (2005) Rigid Steel Conduit - Zinc Coated  |
| NEMA FB 1  | (2003) Standard for Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable |
| NEMA ICS 5 | (2000) Industrial Control and Systems Control Circuit and Pilot Devices   |
| NEMA ICS 6 | (2001) Standard for Industrial Controls and Systems Enclosures  |
| NEMA WC 57 | (2004) Standard Control, Thermocouple Extension, and Instrumentation Cables   |

NEMA WC 70 (1999) Nonshielded Power Cables rated 2000 Volts or Less for the Distribution of Electrical Energy

NEMA WC 74 (2000) 5-46 kV Shielded power cable for Use in the Transmission and Distribution of Electric Energy

UNDERWRITERS LABORATORIES (UL)

UL 360 (2003) Liquid-Tight Flexible Steel Conduit

UL 489 (2002; Rev thru Jun 2006) Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures

UL 50 (2003; R 2005) Standard for Enclosures for Electrical Equipment

1.3 SUBMITTALS

Submittal requirements are included in SECTION 26 00 10.00 25 GOVERNOR REPLACEMENT (Digital Retrofit)

1.4 GENERAL REQUIREMENTS

1.4.1 Materials and Equipment

New and unused materials and equipment meeting all required Standards shall be furnished. Omission of details on the drawings or in the specifications shall not be construed as permitting deviations from required Standards requirements.

1.4.2 Standard Products

Material and equipment shall be the standard products of manufacturers regularly engaged in the manufacture of these products and shall essentially duplicate items that have been in satisfactory use for at least 2 years prior to Solicitation closing date.

1.4.3 Corrosion Prevention

All equipment shall be protected to prevent deterioration from corrosion. The general requirements are specified below; however, other corrosion-resisting treatments that are the equivalent of those specified may be used with COR approval.

1.4.4 Fastenings and Fittings

Screws, bolts, nuts, pins, studs, springs, washers and other miscellaneous fastening and fittings shall be of corrosion-resistant material or shall be treated in an approved manner to render them resistant to corrosion.

1.4.5 Corrosion-Resisting Materials

Corrosion-resisting steel, copper, brass, bronze, copper-nickel-copper alloys are acceptable corrosion-resisting materials.

#### 1.4.6 Corrosion-Resisting Treatments

Treatments shall be in accordance with [ASTM A 123](#) or [ASTM A 153](#).

## PART 2 PRODUCTS

### 2.1 GENERAL

Furnish only new and unused materials and equipment; any damaged or defective material or equipment shall be replaced or repaired. Material and equipment shall be the standard products of manufacturers regularly engaged in the manufacture of these products and shall essentially duplicate items that have been in satisfactory use for at least two years prior to Solicitation closing date. Insofar as practicable, devices or equipment used for the same or similar service shall be of the same make and type and shall be interchangeable when of the same rating.

### 2.2 CONDUIT SYSTEMS

#### 2.2.1 Conduit

##### 2.2.1.1 Rigid Steel

Rigid steel Conduit shall conform to [NEMA C80.1](#) and shall be zinc-coated both inside and outside by hot-dip galvanizing method.

##### 2.2.1.2 Liquid Tight Flexible Steel

Flexible conduit shall conform to [UL 360](#), shall have a hot-dip galvanized steel core, copper ground wire and a waterproof extruded PVC cover.

#### 2.2.2 Fittings

Fittings for rigid conduit shall be threaded and conform to [NEMA FB 1](#). Fittings for flexible conduit shall provide positive bonding.

#### 2.2.3 Outlet and Junction Boxes

##### 2.2.3.1 Sheet Metal Boxes

Sheet metal boxes and covers shall conform to [UL 50](#).

##### 2.2.3.2 Cast Boxes

Cast boxes and covers shall conform to [NEMA FB 1](#). All cast boxes shall be supplied with integral cast hubs or with factory-brazed hubs. All hubs shall be factory threaded.

### 2.3 INSULATED WIRE AND CABLE

#### 2.3.1 General

All Wire and Cable used for power, lighting, control, metering, and relaying systems shall be provided by the Contractor and shall conform to the requirements specified herein. Characteristics, including conductor size, stranding, number of conductors, rated circuit voltage, cabling, and other requirements for each type of service, shall be as indicated on the drawings, or as specified under the detailed requirements of these

specifications for the particular construction or use, unless otherwise stated.

### 2.3.2 Governing Standards

Materials, construction and tests, unless otherwise specified, shall conform to the applicable requirements of [NEMA WC 57](#), [NEMA WC 70](#) and [NEMA WC 74](#). The referenced parts only of [IEEE 383](#) form a part of this specification.

### 2.3.3 Rated Circuit Voltages

Wire and cable for circuits operating at 600 volts and below shall have minimum rated circuit voltages in accordance with Section 3 of [NEMA WC 70](#).

### 2.3.4 Conductors

#### 2.3.4.1 Material

Conductors shall conform to all the applicable requirements of Section 2 of [NEMA WC 70](#) or Section 2 of [NEMA WC 74](#) as applicable, and shall be annealed copper. Copper conductors may be bare, or tin- or lead-alloy-coated, if required by the type of insulation used.

#### 2.3.4.2 Size

Minimum wire size shall be No. 14 AWG for control circuits or as otherwise shown on the drawings; No. 10 AWG for current transformer secondary circuits; No. 12 for lighting.

#### 2.3.4.3 Stranding

Conductor stranding classes cited herein shall be as defined in Appendix G of [NEMA WC 70](#) and Appendix H of [NEMA WC 74](#), as applicable. Any conductors used between stationary and moving devices, such as hinged doors or panels, shall be Class H or K stranding. All other conductors shall have class B or C stranding.

#### 2.3.4.4 Insulation Materials

Insulation shall be cross-linked-thermosetting-polyethylene (XLPE) type, or an ethylene-propylene-rubber (EPR) type meeting the requirements of Section 3 of [NEMA WC 70](#), or Section 4 of [NEMA WC 74](#), as applicable. Polyvinyl chloride (PVC) insulation will not be accepted.

#### 2.3.4.5 Insulation Thickness

The insulation thickness for each conductor shall be based on its rated circuit voltage. The insulation thickness for single-conductor cables and single conductors of multiple-conductor control cables used for control and related purposes rated below 2,000 volts shall be as required by Section 3 of [NEMA WC 70](#).

### 2.3.5 Cable Jackets

All cables shall have jackets meeting the requirements of Section 4.1 of [NEMA WC 70](#), or Section 7.1 of [NEMA WC 74](#), as applicable, and as specified herein. Individual conductors of multiple-conductor cables shall be required to have jackets only if they are necessary for the conductor to

meet other specifications herein. Jackets of single-conductor cables and of individual conductors of multiple-conductor cables, except for shielded cables, shall be in direct contact and adhere or be vulcanized to the conductor insulation. Multiple-conductor cables and shielded single-conductor cables shall be provided with a common jacket, which shall be tightly and concentrically formed around the core. Repaired jacket defects found and corrected during manufacturing are permitted if the cable, including the jacket, afterward fully meets these specifications and the requirements of the applicable standards.

#### 2.3.6 Jacket Material

The jacket shall be one of the materials listed below, in accordance with the applicable paragraphs of [NEMA WC 70](#) and [NEMA WC 74](#). Polyvinyl chloride compounds will not be permitted. Variations from the materials required below will be permitted only if approved for each specific use, upon submittal of sufficient data to prove that they exceed all specified requirements for the particular application.

- a. Neoprene, heavy-duty black.
- b. Chlorosulfonated polyethylene, heavy-duty.
- c. Chlorinated polyethylene, cross-linked, heavy-duty.

#### 2.3.7 Jacket Thickness

The minimum thickness of the jackets at any point shall be not less than 80 percent of the respective nominal thickness specified below:

- a. Thickness of the jackets of the individual conductors of multiple-conductor cables shall be as required by Section 4.1 of [NEMA WC 70](#), and shall be in addition to the conductor insulation thickness required by Section 3 of [NEMA WC 70](#) for the insulation used. Thickness of the outer jackets or sheaths of the assembled multiple-conductor cables shall be as required by Section 4.1 of [NEMA WC 70](#).
- b. Single conductor cables, if nonshielded, shall have a jacket thickness as specified in Section 4.1 of [NEMA WC 70](#). If shielded, the jacket thickness shall be in accordance with the requirements of Section 4.1 of [NEMA WC 70](#), or Section 7.1 of [NEMA WC 74](#), as applicable.

#### 2.3.8 Identification

Only one color-code method shall be used for each cable construction type. Colored braids will not be permitted. Control cable color-coding shall be in accordance with Appendix E of [NEMA WC 57](#). Power cable color-coding shall be black for Phase A, red for Phase B, blue for Phase C, white for grounded neutral, and green for an insulated grounding conductor, if included.

#### 2.3.9 Cabling

Individual conductors of multiple-conductor cables shall be assembled with flame and moisture-resistant fillers, binders, and a lay conforming to Part 5 of [NEMA WC 57](#), or Section 5 of [NEMA WC 70](#), as applicable, except that flat twin cables will not be permitted. Fillers shall be used in the interstices of multiple-conductor round cables with a common covering where



necessary to give the completed cable a substantially circular cross section. Fillers shall be of a non-hygroscopic material, compatible with the cable insulation, jacket, and other components of the cable. The rubber filled or other approved type of binding tape shall consist of a material that is compatible with the other components of the cable and shall be lapped at least 10 percent of its width.

#### 2.3.10 Dimensional Tolerance

The outside diameters of single-conductor cables and of multiple-conductor cables shall not vary more than 5 percent and 10 percent, respectively, from the manufacturer's published catalog data.

#### 2.3.11 Inspection and Tests

Inspection and tests of wire and cable furnished under these specifications shall be made by and at the plant of the manufacturer, and shall be witnessed by a COR, unless waived in writing. The Government may perform further tests before or after installation. Testing in general shall comply with Part 6 of [NEMA WC 57](#), Section 6 of [NEMA WC 70](#), or Section 9 of [NEMA WC 74](#), as applicable. Specific tests required for particular materials, components, and completed cables shall be as specified in the sections of the above standards applicable to those materials, components, and cable types. Tests shall also be performed in accordance with the additional requirements specified below:

a. High-Voltage Test Source. Where applicable standards allow a choice, high-voltage tests for cables to be used exclusively on dc circuits shall be made with dc test voltages. Cables to be used exclusively on ac circuits shall be tested with ac test voltages. If both ac and dc will be present, on either the same or separate conductors of the cable, ac test voltages shall be used.

b. Flame Tests. All multiple-conductor and single-conductor cable assemblies shall pass the [IEEE 383](#) flame tests, paragraph 2.5, using the ribbon gas burner. Single-conductor cables and individual conductors of multiple-conductor cables shall pass the flame tests of Part 3 of [NEMA WC 57](#), Section 6 of [NEMA WC 70](#), or Section 7.1 of [NEMA WC 74](#), as applicable. If such tests, however, have previously been made on identical cables, these tests need not be repeated. Instead, certified reports of the original qualifying tests shall be submitted.

c. Independent Tests. The Government may at any time make visual inspections, continuity or resistance checks, insulation resistance readings, power factor tests, or dc high-potential tests at field test values. A cable's failure to pass these tests and inspections, or failure to produce readings consistent with acceptable values for the application, will be grounds for rejection of the cable.

#### 2.3.12 Packaging and Marking

The cables shall be furnished one length to a reel or coil. Each length, and the outside of each reel or coil, shall be plainly marked or tagged to indicate the cable length, voltage rating, conductor size, and manufacturer's lot number and reel number. Cables for exclusively dc applications shall be identified as such. Reels shall remain the property of the Contractor.

## 2.4 GROUND CONDUCTORS

The ground conductors shall be bare soft, or medium hard drawn Class A or Class B stranded copper cables. Size shall be as indicated on the contract drawings. Necessary bolts, compression fittings, washers, and locking devices which are required for attaching the ground strap shall be provided and be of copper alloy.

## 2.5 SPECIAL BOXES, CABINETS, AND ENCLOSURES

### 2.5.1 General

This Section does not apply to cabinets furnished under SECTION 26 00 10.00 25, GOVERNOR REPLACEMENT (Digital Retrofit). Special boxes, cabinets, and enclosures shall be provided as required. Boxes of 170 cubic inches interior volume or less are considered as conduit outlet boxes. All boxes, cabinets, and enclosures having an interior volume in excess of 170 cubic inches will be considered to be special insofar as compliance with these specifications is concerned. Conduit and cable entrance locations shall be as detailed on the shop drawings. Brackets for mounting of internal equipment shall be supplied. Shop drawings submitted for special boxes, cabinets, and enclosures shall indicate the internal volume and show the individual assemblies.

### 2.5.2 Steel Cabinets and Boxes

Steel cabinets, junction, splice, and pull boxes, and other steel boxes and enclosures and their doors and trim shall comply with the applicable requirement of UL 50 and NEMA ICS 6, except as noted below. Sheet steel used in cabinets, special boxes, or enclosures, shall be not lighter than No. 14 U.S. Standard gage. Cover fastening screws shall be placed not more than twelve inches apart along the perimeter of a box.

All special steel boxes (except Governor cabinets and enclosures), cabinets, doors, and covers shall be made of galvanized sheet steel or shall be hot-dip galvanized after fabrication. Junction and pull boxes shall be furnished with covers of the same gage metal as the box.

Hubs shall be provided where required by the type of enclosure. T & B "Bullet Hub" or Myers "Scru-tite" fittings or equal are acceptable. Concentric ring knockouts will not be allowed for conduit entrances. Drilling in the field, of cabinets and boxes to be embedded will be permitted only when approved. Galvanizing damaged during fabrication or field installation or drilling shall be repaired.

Where standard NEMA type enclosures are not mentioned, control cabinets and other surface mounted enclosures shall be NEMA Type 12, per NEMA 250, as modified herein. Holes will be permitted in NEMA Type 12 enclosures for mounting provisions and for cover mounted devices. Doors, handles, trim, panels, and gutters shall be furnished as specified or as necessary.

### 2.5.3 Doors, Covers, Cabinet Trim, and Hardware

Each door shall be equipped with flush or semi-concealed hinges and, if the height exceeds 36 inches, with a vault type handle and a three point catch. NEMA Type 12 enclosures shall have hinged covers and shall be modified to have door handles equipped with three point catches in lieu of retained fasteners. Except for panelboard cabinets, double doors or doors in pairs shall be provided wherever the width of a door opening exceeds 24

inches or the height of the opening exceeds 36 inches. Locks shall be provided for cabinets in which equipment energized at 125 VDC, 120 VAC, or greater voltages is exposed when the door is open. The locks shall be master keyed using interchangeable 6-pin tumbler mechanisms in removable cores as manufactured by the Best Universal Lock Co., Inc. Two control keys for the removal of the interchangeable cores of the master key system and two master keys for the locks of each cabinet shall be furnished. Identifying nameplates shall be provided on the front of the doors with designations as shown on the shop drawings.

## 2.6 MOLDED CASE AIR CIRCUIT BREAKERS

### 2.6.1 General

Molded case air circuit breakers shall conform to the applicable requirements of [UL 489](#), shall be fully rated, and shall have voltage ratings and interrupting ratings hereinafter stated. The circuit breakers shall be manually operated and shall have trip free operating mechanisms of the quick make, quick break type. All poles of each breaker shall be operated simultaneously by means of a common handle, and they shall be enclosed in a common molded plastic case. The contacts of multi pole breakers shall open simultaneously when the breaker is tripped manually or automatically. The operating handles shall be provided with a means of indicating clearly whether the breakers are in the "On", "Off", or "Tripped" position. The circuit breakers shall be of the individually mounted, stationary type. Circuit breakers installed in existing equipment shall be compatible with that equipment, and to the maximum possible extent identical to existing similar breakers. Each circuit breaker shall be provided with mechanical pressure type terminal lugs for single conductor stranded copper cables of the size required for the application.

### 2.6.2 Trip Units

The circuit breakers shall be of the automatic type provided with combination thermal and instantaneous magnetic trip units, unless otherwise specified. Instantaneous magnetic trip units shall be set at approximately ten times the continuous current ratings of the circuit breakers.

### 2.6.3 AC Circuit Breakers

Circuit breakers for 120 volt AC circuits shall be rated not less than 120/240 or 240 volts AC, and shall have a minimum NEMA interrupting capacity of 10,000 symmetrical amperes.

### 2.6.4 DC Circuit Breakers

Circuit breakers for 125 volt DC circuits shall be two pole type rated 125/250 or 250 volts DC, and shall have a minimum NEMA interrupting capacity of 5,000 amperes DC.

## 2.7 POWER SUPPLIES

Where 125 VDC is not compatible with the new equipment, the Contractor shall supply all such power supplies correctly rated for the maximum calculated load plus 10 percent. Power supplies shall provide normal operating voltage to the equipment over the normal input range of the 125-volt DC power source, 105 to 140 Volts. Switching type power supplies shall be filtered such that no more than 0.1 percent ripple is present in either the input or output voltage.

## 2.8 AUXILIARY AND INTERPOSING RELAYS

Auxiliary and interposing relays shall be enclosed, self-reset, and shall be provided with a minimum of four contacts easily convertible from normally open to normally closed. Relay coils and contacts shall be rated for continuous operation in 125 volt D.C. or 120 volt AC circuits as required. Relay coils used in 125 volt DC circuits shall operate reliably with continuously applied voltage between 105 and 140 volts DC. All relay coils shall be furnished with surge suppression devices to limit surge voltages which may be generated when the coil circuits are de-energized. Contact ratings shall comply with NEMA ICS 5, Part 1 and Part 2. The single-contact inductive load interrupting capacity shall be not less than N150 for 125 VDC or A150 for 120 VAC as defined in NEMA ICS 5, Section 4 CHARACTERISTICS AND RATINGS, and shown in Tables 1-4-1 and 1-4-2. All relays shall incorporate diode pilot lights to indicate the relay state.

## PART 3 EXECUTION

### 3.1 CONDUIT SYSTEMS

#### 3.1.1 Installation

a. These requirements apply to work internal to the Governor equipment furnished, between the various components of the equipment furnished, and as needed for external connections to the Governor equipment furnished that are supplied by you. Installation work at the Hydro Project site where the Governor retrofit equipment is to be installed is not included in the work requirements.

b. All leads from the components and accessories shall be run in rigid galvanized conduit and connected to terminal blocks in the terminal cabinet. All conduit runs installed shall be terminated at devices or connection boxes and at the terminal cabinet in tapped holes having not less than 3½ pipe threads, or in standard pipe-threaded couplings or nipples integral with or welded to the device or cabinet. Similar pipe-threaded connections shall be provided on the terminal cabinet for attaching incoming conduit. No running threads on conduit will be permitted. Conduit, fittings and accessories shall be installed in accordance with details shown and as specified herein:

(1) All conduit bends shall have a radius of not less than ten times the conduit's inside diameter.

(2) No threadless fittings or running-thread couplings shall be used on conduit runs.

(3) Metal conduits shall be cut only with a tool approved for the purpose. Roller type pipe cutters shall not be used on conduits. All cuts shall be square and the conduit opening shall not be constricted. After cutting and threading, conduit ends shall be reamed to remove rough edges and burrs and the entire conduit shall be thoroughly cleaned to remove all cuttings, dirt and oil from its interior. Threads shall be clean cut. Threaded joints in metal conduit and terminations in cast boxes shall have the threads coated with an approved joint compound, and shall be screwed tight to make the joint watertight and to provide electrical continuity of a given conduit system. Suitable

watertight conduit hubs and bushings shall be provided where conduit terminates within a box, terminal cabinet or accessory that has no threaded hub or fitting to receive threaded conduit.

(4) The entire metallic conduit system installed by the Contractor shall be electrically continuous and thoroughly grounded. No welding or brazing of the grounding conductor to the conduit will be allowed. All grounding connections to the conduit shall be made by means of grounding bushings or by an approved pressure type connector. However, note that conduit are not to be used as ground conductors. Separate ground conductors shall be run within the conduit to provide ground circuits or connections.

### 3.2 WIRE AND CABLE

#### 3.2.1 General

For the purposes of this contract, the term "internal wiring" shall be used to designate the Governor Manufacturer's factory installed wiring furnished with the Governor, and the term "external wiring" shall be used to designate field installed wiring by the installation contractor under a separate contract. You are responsible for determining the actual cable length required for internal wiring to make an installation without splices.

#### 3.2.2 Internal Wiring

All governor internal wiring shall be furnished and installed as indicated in SECTION 26 00 10.00 25, paragraph WIRING AND DEVICES.

#### 3.2.3 Terminations

All cable and wire connections shall be made at terminal blocks using ring-tongue connectors. The shield and shield insulating jacket of shielded signal cables and conductors, if applicable, shall be maintained to a point as close to the terminals as possible. The shield insulating jacket shall not be stripped from the shield except where necessary to make the ground connection. All signal cable shields shall be grounded at one end only, and at the end where it is ungrounded, use insulated cable marker or heat shrink tubing to protect it from accidental grounding.

#### 3.2.4 Wire and Cable Markers

All multiple-conductor cables shall be clearly identified with the cable designation by either embossed one-inch diameter brass tags or by embossed aluminum band Wire Markers. Tags or band markers shall be securely fastened to the cables at each termination, junction or pull box, where cables enter or leave cable trays, and as required at other points of access. Wires and individual conductors of control and power cables shall be identified with non-metallic tube-type markers at each termination. Tube-type markers shall be suitable for contact with rubber or neoprene or plastic. Tubing shall be sized to fit the wire being marked and shall have black marking on a light colored background. Installed markers shall be uniform in position on the wire and legends shall be visible when wires are terminated on terminal blocks or equipment. A written certificate from an approved independent testing laboratory shall be furnished to indicate that the markers will not stain or discolor after 20 years service when subjected to an accelerated aging test while in contact with wire insulating materials. Identification on tags and markers shall be as shown or as directed.

### 3.2.5 Color Coding

Insulation of individual conductors of multiple conductor cables shall be color coded in accordance with Appendix E of [NEMA WC 57](#), except that colored braids will not be permitted. Only one color-code method shall be used for each cable construction type. Power cable color-coding shall be black for Phase A, red for Phase B, blue for Phase C, white for grounded neutral, and green for an insulated grounding conductor, if included.

END OF SECTION

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**GOVERNOR CONTROL EQUIPMENT REPLACEMENT**

**PART 1 GENERAL**

**1.1 INTENT TO PROCURE PRODUCT**

**1.1.1 Modular Design**

The Government's intent is to procure Governor control retrofit equipment for existing hydroelectric turbine Governors that are insofar as possible of modular design, comprised of components that are available from more than one Manufacturer and are functionally interchangeable. To meet that intent, Governor components and software are required to conform to Standards as specified herein.

**1.1.2 Software Standards**

Digital controller software compatibility is critical to the capability of using programmable logic controllers available from several Manufacturers, so conformance with software Standards is required.

**1.1.3 Turbine Types**

This Specification will include Governors for both Kaplan and Francis type turbines. Sections that apply only to Kaplan turbines are indicated thus: (Kaplan)

**1.2 FUTURE ADDITION OF FEATURES BY GOVERNMENT**

Among other possible additions, the Government intends to add features to enhance the efficiency of operation of the hydraulic turbine generator sets controlled by the Governors to be retrofit with equipment procured under these Specifications. The design and software for these modifications will be produced by the Government using the provisions for programming and program additions specified herein. Provisions for process inputs to support efficiency enhancements are included in these Specifications, including inputs for Winter-Kennedy Tap differential pressure inputs.

**1.3 SUMMARY OF WORK**

**1.3.1 General**

Furnish engineering, development, testing, and furnish Governor control retrofit equipment to convert existing hydraulic cabinet actuator Governors to electronically controlled hydraulic turbine Governors, comprised of programmable logic controllers and auxiliary equipment, that operate and control hydraulic turbine control and speed regulating equipment. Furnish services of an Erection Engineer when requested; furnish services of skilled programmers when requested; furnish training of Government Operating personnel, and maintenance personnel as specified herein.

**1.3.2 Equipment Installation**

Installation of equipment you furnish is to be done by an Installation

Contractor, under a separate contract. The Government will be responsible for the qualifications of the Installation Contractor; when directed, you are to provide the services of an Erection Engineer who is knowledgeable of and skilled in the application of the Governor equipment you furnish under these Specifications. Your Erection Engineer is to assist in the installation and testing of the Governor equipment at each installation site.

#### 1.4 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.

##### ASME INTERNATIONAL (ASME)

ASME PTC 29	PTC 29-2005 Speed-Governing Systems for Hydraulic Turbine-Generator Units
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##### INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

IEC 60308	Hydraulic Turbines - Testing of control systems
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IEC 61000-4-5	(2001) Electromagnetic Compatibility (EMC) - Part 4-5: Testing and Measurement Techniques; Surge Immunity Test
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IEC 61131-1	(2003) Programmable Controllers - Part 1: General Information
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IEC 61131-2	(2003) Programmable Controllers - Part 2: Equipment requirements and tests
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IEC 61131-3	(2003) Programmable Controllers - Part 3: Programming Languages
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IEC 61131-5	(2003) Programmable Controllers - Part 5: Communications
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IEC 61131-8	(2003) Programmable Controllers - Part 8: Guidelines for the application and implementation of Programming Languages
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IEC 61362	First edition 1998-03 Guide to specification of hydraulic turbine control systems
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##### INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C37.2	(1996; R2001) Electrical Power System Device Function Numbers and Contact Designations
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IEEE 125	(1988; R 1996) Practice for Preparation of Equipment Specifications for Speed-Governing of Hydraulic Turbines Intended to Drive Electric Generators
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NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA FB 1	(2003) Standard for Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable
NEMA ICS 1	(2000; R 2005) Industrial Control and Systems: General Requirements
NEMA ICS 2	(1996; R 2004) Standard for Industrial Control and Systems: Controllers, Contractors, and Overload Relays Rated Not More than 2000 Volts AC or 750 Volts DC: Part 8 - Disconnect Devices for Use in Industrial Control Equipment
NEMA ICS 5	(2000) Industrial Control and Systems Control Circuit and Pilot Devices
NEMA WC 70	(1999) Nonshielded Power Cables rated 2000 Volts or Less for the Distribution of Electrical Energy

UNDERWRITERS LABORATORIES (UL)

UL 467	(2004) Standard for Grounding and Bonding Equipment
UL 514B	(2004; Rev thru Apr 2006) Standard for Conduit, Tubing and Cable Fittings

1.4.1 Terminology

The following terms:

Governing System;  
speed sensing elements;  
Governor control actuator;  
hydraulic pressure supply system;  
electric-hydraulic Governor;  
mechanical-hydraulic Governor;  
distributing valve;  
speed changer;  
speed regulation changer;  
speed droop changer;  
servomotor limit;  
turbine control servomotor;  
slow closure device;  
servomotor velocity limiter;

all may be used in this Specification, and shall be as defined in Section 2 of IEEE 125.

1.4.2 Functions and Characteristics

Functions and characteristics that may be used or referred to in these specifications:

Servomotor stroke;  
Servomotor position;  
Servomotor time;  
Cushioning time;  
Speed droop and speed regulation;  
Governor speed deadband;  
Blade control deadband (Kaplan);  
Governor dead time;  
Stability;  
Rated speed;  
Overspeed;  
Underspeed;  
Maximum momentary speed variation;  
Runaway speed;  
Rated head;  
Steady-state governing speed band;  
Steady-state governing load band;  
Speed;  
Speed reference;  
Speed deviation;  
Power output;  
Rated power output;  
Maximum power output;  
Governor feedback control system;  
Integral gain;  
Derivative gain;  
Time constant of the damping device;  
Proportional gain;  
Water inertia time;  
Mechanical inertia time;

shall be as described and defined in Section 2 of [IEEE 125](#).

#### 1.5 SUBMITTALS

As stated in the general provisions of these Specifications, the Government intends to award separate Task Orders to procure equipment for use at several Corps of Engineers hydroelectric projects. Equipment that will be provided for various plants under these specifications will be comparable in design and arrangement. Accordingly, more time will be allowed for submittals under the initial Task Order for Kaplan governor retrofit, and the initial Task Order for Francis governor retrofit, than will be allowed for submittals under subsequent Task Orders. Refer to following paragraphs in this section, and 'Drawings, Data and Procedures' in Part 2.

All drawings, and other data as required, shall be submitted in electronic format as well as the required number of hard copies. Electronic format shall be compatible with, and usable with, Bentley Microstation Version 8 format and software. Government approval is required for all submittals with a "G" designation; submittals having an "FIO" designation are for information only. The following shall be submitted as stated below:

##### [SD-02 Shop Drawings](#)

##### [Governor Drawings; G, HDC](#)

Governor drawings showing the proposed arrangement of Governor, modifications to existing equipment, and piping arrangement shall be submitted for approval no later than 90 calendar days after

award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Governor Wiring Diagrams; G, HDC

Governor wiring diagrams that may be needed to show changes due to addition or modifications to existing equipment, that will include connection diagrams with wire designations, and schematic diagrams. Show wire designations on schematic diagrams. Entrance locations of all external cables shall be indicated on the Contractor's shop drawings. Additional wire and cable designations for identification of external circuits will be required. The Installation Contractor will use the existing Governor terminal cabinet drawings, and develop new wiring diagrams showing the new connections. Where connections are made at distribution panels, or other existing switchboards, the Installation Contractor will mark-up the existing drawings. You may be requested to provide the services of an Erection Engineer to assist with this. Items required under this Paragraph shall be submitted no later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Proportional Valves; G, HDC

Submit for approval detailed shop drawings showing the manifold arrangement and mounting details for the new proportional valves not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Wicket Gate position transducer installation; G, HDC

Design and submit for approval suggested Gate position transducer installations and hardware not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures; Paragraph: Wicket Gate Position Input Data. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### (Kaplan) Turbine Runner Blade angle transducer installation; G, HDC

Design and submit for approval suggested blade angle position transducer installations and hardware not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures; Paragraph: Turbine Runner Blade Position Input Data (Kaplan). Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Speed Signal Generator (SSG) installation details; G, HDC

Submit for approval detailed drawings of the typical Speed Signal

Generator installation and hardware not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Piping Schematics; G, HDC

Submit for approval detailed drawings showing typical all new Francis and Kaplan unit piping schematics to be submitted not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Electrical Schematics; G, HDC

Submit for approval detailed drawings (electrical schematics) showing wiring and controls including cabinet arrangement not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

#### Nameplate Schedule; G, HDC

Submit a nameplate schedule of markings for nameplates with the nomenclature and units of measure used in the United States not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Drawings, Data and Procedures. Submit three hard copies, and an electronic format copy. One drawing will be returned with review action noted.

### SD-03 Product Data

#### System Design Specification (Kaplan); G, HDC

Submit the Kaplan System Design Specification (SDS) for approval not later than 60 calendar days after award of the first Task Order for a Kaplan governor, Paragraph: Drawings, Data and Procedures

#### System Design Specification (Francis); G, HDC

Submit the Francis System Design Specification (SDS) for approval not later than 60 calendar days after award of the first Task Order for a Francis governor, Paragraph: Drawings, Data and Procedures

#### Manufacturers Information; G, HDC

Submit for approval the names of the manufacturers of all machinery and other equipment intended for incorporation into the work, together with performance capacities and other relevant information pertaining to the equipment, not later than 90 calendar days after award of the first Task Order, and 45 days



after award of subsequent Task Orders, Paragraph: Governor Type. Submit three copies; one copy will be returned with review action noted.

#### Governor Block Diagram; G, HDC

The Governor block diagram required is to be an accurate mathematical model of the turbine speed Governor for use in computer power system simulations. Submit the model not later than 90 calendar days after award of a Task Order. The model shall be based on the requirements of the IEEE hydro Governor model set, and be usable with power system analysis software (PSAS), including the GE Energy Corp PSAS. Parameter range information shall be included with the model. Submit three copies; one copy will be returned with review action noted.

#### PLC Application Software Block Diagrams; G, HDC

Submit the software block diagram of the proposed software not later than 90 calendar days after award of a Task Order. Submit three copies; one copy will be returned with review action noted.

#### PLC Application Software - Table Interpolation Method; G, HDC

Submit the Interpolation Algorithm and software for the proposed interpolation method not later than 90 calendar days after award of a Task Order. Submit three copies; one copy will be returned with review action noted.

#### PLC Application Software Development Suite; G, HDC

Submit for review and approval two copies of the proffered PLC Program Development Suite not later than 90 calendar days after award of the first Task Order. IEC 61131-1, Section 4. The Contractor shall correct any deficiencies and resubmit the PLC Application Software Development Suite within 30 calendar days. After testing the program and the code it produces, notice of acceptance, areas of deficiency, or reasons for rejection, will be given to the Contractor; when accepted, deliver the complete software to HDC installed on two laptop computers, ready to be run.

#### Human-Machine Interface (HMI) Equipment and Software; G, HDC

Submit for approval description of the flat panel display, controller interface, software, and screen building software proposed, not later than 90 calendar days after award of a Task Order. Submit four copies; one copy will be returned with review action noted.

#### Catalog Data; G, HDC

Submit for approval specific catalog data for equipment, components, or materials intended for use in the manufacture of the Governors, not later than 90 calendar days after award of the first Task Order, and 45 days after award of subsequent Task Orders, Paragraph: Governor Type. Submit three copies; one copy will be returned with review action noted.

#### Contractor Furnished Training; G, HDC

Submit for approval a course outline and subject matter for the theory, operation, and maintenance of the Governor not later than 45 calendar days prior to the starting date of the first session of Contractor furnished training, Paragraph: CONTRACTOR FURNISHED TRAINING OF GOVERNMENT PERSONNEL. Submit three copies of the proposed training scope and agenda; one copy will be returned with review action noted.

#### SD-06 Test Reports

##### Factory Tests; G - HDC

The following shall be submitted:

- a. Method and Procedures - Submit for approval a complete outline of the proposed method and procedure for all tests not later than 45 calendar days prior to the start of Factory Tests. Submittal shall include a list of instruments and equipment to be used and a sample of the data sheets for recording the test data, Paragraph: FACTORY AND FIELD TESTS. See ASME PTC 29, and IEC 60308. Submit two copies of the required material.
- b. Test Reports - Three copies of test reports shall be furnished not later than 15 working days after completion of tests.

##### Field Tests; G - HDC

The following shall be submitted:

- a. Method and Procedures - Submit for approval a complete outline of the proposed method and procedure for all field tests not later than 45 calendar days prior to the scheduled start of field tests. Submittal shall include a list of instruments and equipment to be used and a sample of the data sheets for recording the test data, Paragraph: FACTORY AND FIELD TESTS. See ASME PTC 29, and IEC 60308. Submit two copies of the required material. This material will be used by the Installation Contractor to perform the Field Tests in the presence of the Erection Engineer you are to furnish. The Contracting Officer will provide a Government representative to oversee the tests.
- b. Test Reports - Three copies of test reports shall be furnished not later than 15 working days after completion of tests.

#### SD-07 Certificates

##### Erection Engineer Certifications G, HDC

Submit for approval the qualifications and certifications of each Erection Engineer you intend to provide for each Governor furnished. See Section C, Erection Engineer. Each Governor is to be installed by an Installation Contractor that will be selected by the Government. Your Erection Engineer must have the skills, knowledge, and ability to advise the Government as to the correctness of the Governor installation as it is performed by the Installation Contractor, when and as requested by the Contracting Officer. Your Erection Engineer, when requested by the Contracting Officer, shall advise the Government on the correct

conduct and performance of all Field Tests required by the Specifications, and as needed to show that each Governor meets all the requirements of these Specifications.

#### Skilled Programmer Certifications G, HDC

Submit for approval the qualifications and certifications of each Programmer you intend to make available. Your Programmer must have the skills, knowledge, and ability to add software functions to the Governor PLC when requested by the Contracting Officer, and produce documentation describing the work accomplished.

#### SD-08 Manufacturer's Instructions

##### Equipment Installation Plan; G, HDC

A typical equipment installation plan for both Kaplan and Francis turbines shall be submitted for approval not later than 90 calendar days after award of the first Task Order. The plans shall set forth detailed procedures, organized in the order of work progression. The plans shall list all work steps necessary to remove old Governor components, including restoring cables and guides, followed by inspection and refurbishment as necessary of the distributing valves. The plans shall show installation of the new digital controller with transducers, and Human-Machine Interface (HMI) controls, switches and gauges remote from the Governor. The plans shall include testing, adjusting and commissioning of a modified Governor. Submit three copies of this plan; one copy will be returned with review action noted.

#### SD-10 Operation and Maintenance Data

##### Operation and Maintenance Manuals; G, HDC

Operation and Maintenance manuals shall be submitted as specified in SECTIONS 01 30 60.00 25 OPERATIONS AND MAINTENANCE DATA, and 01 33 00 SUBMITTAL PROCEDURES.

### 1.6 TYPE AND DESCRIPTION

#### 1.6.1 Type

The Governor retrofit equipment furnished under these specifications shall consist of electronic controller (i.e., programmable logic controller {PLC} complete with required software) based digital controls designed for application to oil-pressure operated, analog electrical and analog mechanical Governors. Note that electronic controller equipment provided under this contract shall not require internal fans for cooling, nor will equipment requiring internal fans be accepted.

#### 1.6.2 Equipment

The retrofit packages for each Governor shall include Human-Machine Interface (HMI) equipment and software, new redundant Gate position transducers, new redundant turbine runner blade angle transducers (Kaplan), new redundant Watt transducers, new redundant frequency transducers, a new speed-sensing generator, and process Input/Output (I/O) equipment.

### 1.6.3 Software

Complete, debugged, operational application software shall be furnished with each governor supplied. Software functions and features shall be as specified herein, and include provisions to monitor Forebay and Tailwater levels for determination of correct operation as specified and required to meet requirements of these specifications and cited Standards.

### 1.6.4 Operation

The complete retrofitted Governor shall be designed to start and bring up to rated speed, regulate the speed, control the Wicket Gate position, and turbine runner blade angle (Kaplan), of the turbine generators specified below, and on command stop the turbine generator by executing the shutdown operation sequence. The Governors shall operate with speed regulation over the full rated head of the turbine. Operation shall be 'fail-safe', so that upon failure of the governor controller, all control actions shall cease, and all control output contacts shall assume their normal condition.

### 1.6.5 Minimum Requirements

The following Specification sections, except those covering tools and spare parts, describe the minimum requirements for one retrofitted Governor but shall apply to all retrofitted Governors furnished under these Specifications. Corresponding components of the Governors, including spare parts, shall be of the same materials and workmanship and shall be interchangeable insofar as practical.

## 1.7 GOVERNOR PERFORMANCE REQUIREMENTS

The Governor, after being retrofitted with new digital control equipment, shall meet the following performance requirements as demonstrated by field tests. Provide written notice to the Government within 45 calendar days after Contract award if modifications to existing equipment, not specifically indicated in this Specification, are needed to meet the prescribed performance.

### 1.7.1 Stability

The Governor system shall be capable of stable control of the speed of the turbine when operated at rated speed and no load, when operated at rated speed at all power outputs inclusive of maximum power output, and while its Turbine-generator may be operating in the 'condensing' mode. IEC 61362, 4.15.6. (Turbine running in air). The Governor system shall also be capable of stable control of the power output of the turbine at all power outputs, inclusive of maximum power output, when the unit is operating in parallel with other units in the plant or synchronized to a power transmission system. Assuming the hydraulic system of the turbine and associated water passages is inherently stable, the Governor system shall be deemed stable under the following conditions:

- a. Speed-Stability Index - The magnitude of the sustained speed oscillation caused by the Governor shall not exceed 0.30 percent of rated speed with the unit operating at rated speed and no load, or operating at rated speed with an isolated sustained load and with the Governor speed regulation set at 5 percent. The magnitude of speed oscillations is defined as the sum of the amplitude of such oscillations above and below the rated speed. See IEEE 125, 4.1.3.

b. Power-Stability Index - The magnitude of the sustained power output oscillation caused by the Governor shall not exceed 0.4 percent of the rated capacity of the turbine with the unit operating under sustained load demand in parallel with other units which are themselves capable of operating in parallel. The speed regulation shall be set at 5 percent. The magnitude of power oscillations is defined as the sum of the amplitudes of such oscillations above and below the average power. See IEEE 125, 4.1.1.

c. Load Rejection Stability - The Governor system shall meet the requirements of IEEE 125, Paragraph 4.1.2:

Following tripping of the generator breaker at any load inclusive of maximum load, speed shall be returned to the set point as may be modified by speed regulation, with no more than one underspeed deviation not to exceed 5 percent and one over-speed deviation not to exceed 5 percent subsequent to the initial overspeed deviation.

d. Governor Load Damping - The Governor system shall be suitably damped. This shall be demonstrated by meeting the criteria described in IEEE 125, Paragraph 4.1.3. A step load increase of not more than 5 percent of rating shall be applied when the turbine is operating at 90 percent of rating and within plus/minus 10 percent of rated head.

#### 1.7.2 Speed Signal

The speed signal to the speed responsive elements shall vary directly with the speed of the main shaft of the unit for all rates of acceleration and deceleration up to 20 percent of rated speed per second. Vibration or normal orbital movement of the main shaft shall not affect the quality or fidelity of the speed signal.

#### 1.7.3 Governor Dead Time

For a step load change of at least 10 percent of turbine capacity, the dead time of the Governor shall be not more than 0.2 second. See IEEE 125, Paragraph 4.4.

#### 1.7.4 Speed Dead Band

When operating at rated speed, the total magnitude of the change in speed within which there is no resulting change in the position of the Gate servomotors shall not exceed 0.02 percent of rated speed at any Gate opening. IEEE 125, Paragraph 2.2.6.

#### 1.7.5 Gate-Control Dead Band

The total magnitude of the change in steady-state speed within which there is no resulting change in the position of the gate servomotors at rated speed of the unit shall not exceed 0.02 percent of the rated speed at any gate opening.

#### 1.7.6 Blade Control Deadband (Kaplan)

The blade control deadband shall not exceed 1.0 percent of the virtual cam change required to move the blades from extreme 'flat' to extreme 'steep' position. IEEE 125, Paragraph 2.2.7.

#### 1.7.7 Transient Immunity

The Governor system shall not misoperate due to high voltage or high-frequency transients, which may be induced in the control circuitry or power supplies internal or external to the Governor system. The Governor shall be designed and tested for surge withstand capability in accordance with IEC 61000-4-5, Table 1 Test level 2, Test instrumentation described in Clause 6, repetition rate once per minute, device selected according to Clause 7; or NEMA ICS 1, Clause 8; test voltages as in Table 8-4, Impulse test voltages as determined by Annex A. The Governor system shall be insensitive to radiated high-frequency interference such as that coupled from portable 10-watt output radio transmitters in the 150-180 MHz band operating within 1 meter of the Governor cabinet with the cabinet doors closed. The PLC itself shall meet the requirements of IEC 61131-2.

#### 1.7.8 Reliability

The controller shall have a published minimum MTBF (Mean Time Between Failure) of at least 40,000 hours. The retrofit governor shall have a minimum availability of 99.9%, as demonstrated by the availability test described in Paragraph: Availability Test.

### PART 2 PRODUCTS

#### 2.1 GENERAL

A typical equipment installation plan for both Kaplan and Francis turbines shall be submitted for approval. [Equipment Installation Plan](#).

##### 2.1.1 Materials

All materials shall conform to the applicable specifications and standards listed and to the additional requirements specified herein. Any materials required in the work, but not specifically mentioned in the specifications, shall be approved for the purpose intended prior to their incorporation. Where new paint work, or repairs to existing paint work, is required, lead-based or lead bearing paints shall not be used.

##### 2.1.2 Governor Power Supply

Power for the governor equipment supplied shall be from the existing (nominal) 125 VDC Powerhouse battery. The nominally 125 VDC source voltage may vary from a minimum of 105 volts to a maximum of 140 volts. Unless otherwise specified, equipment furnished shall be suitable for continuous duty over this supply voltage range.

##### 2.1.3 Output Contacts

###### 2.1.3.1 General

Control output contacts from process Output equipment furnished shall be suitable for continuous operation in 120 VAC or 125 VDC circuits as required. Relay coils used in 125 VDC circuits shall operate reliably from battery powered sources with voltages that can vary between 105 and 140 volts DC in normal operation. Contacts shall have at least a 10-ampere continuous current rating. The single-contact inductive load interrupting capacity shall be not less than N150 for 125 VDC or A150 for 120 VAC as defined in NEMA ICS 5, Section 4 CHARACTERISTICS AND RATINGS, and shown in

Tables 1-4-1 and 1-4-2. All relay coils furnished shall be provided with surge suppression devices to limit surge voltages, which may be generated when the coil circuits are interrupted.

#### 2.1.3.2 Unit Control Contacts

Governor output contacts will be required to operate Turbine and Generator control circuits. Specific requirements and process I/O requirements will be provided with each Task Order issued under these Specifications, but in general, at least 24 control output contacts, and an equal number of contact position sensing inputs will be required.

#### 2.1.3.3 Turbine Generator Start/Stop Sequences

Discrete electromechanical relay logic has in the past been used to implement semi-automatic Turbine-Generator Start/Stop sequences. Control output contacts from the Governor will be required to replace these at Projects where they are used, or provide the function at projects that do not presently have it. Governor PLC software logic and control contact outputs and inputs will be required to replicate relay-logic based main unit start and stop control sequences.

#### 2.1.4 Governor Type

The work and equipment furnished under these specifications shall result in Governors of the oil-pressure actuated, proportional valve-operated distributor valve type with electrically driven or electrically controlled speed-responsive elements. IEC 61362; IEEE 125; NEMA ICS 2; NEMA ICS 1; NEMA ICS 5. The Governor shall be designed to regulate the unit speed and efficiency using control of Wicket Gates, and (Kaplan) turbine runner blades. The Contractor shall furnish design calculations, catalog data, capacities, and manufacturers information for specific machinery and components intended for use in the manufacture of the Governors. The Contractor shall furnish catalog information for all components incorporated into the Governor, including its controller. Equipment or materials delivered without prior approval shall be at the Contractors risk.

#### 2.1.5 Drawings, Data and Procedures

The Contractor shall furnish the following information for approval in accordance with Paragraph: SUBMITTALS.

a. Drawings. The Contractor shall submit:

1. Governor block diagram/drawings;
2. A complete set of Governor Drawings;
3. Wicket Gate position transducer installation;
4. (Kaplan) turbine runner blade angle transducer installation;
5. Speed Signal Generator (SSG) installation details;
6. Any modifications to existing equipment, piping, electrical schematics, connections and controls;
7. Nameplate schedule.

The drawings shall include plan views, elevation views, and sections as required to completely show arrangement and construction of the completed retrofit Governor. The drawings shall also include typical [piping schematics](#) and electrical connection diagrams with wire designations, and schematic diagrams, to illustrate operation of the Governor and the interface with the existing control and annunciation systems. [Governor wiring diagrams](#) shall be in a form showing physical arrangement of the Governor with interconnecting wiring shown by wire origin and terminal designations. Individual conductor identification shall be identical on wiring diagrams and schematic diagrams. If the Contracting Officer determines that drawings and data furnished are inadequate to show the design meets the intent of these Specifications, or to satisfy the requirements of the Contracting Officer, the Contractor shall furnish additional drawings and data as specifically requested in writing.

b. Governor block diagram. If different than the original submittal, resubmit for approval an accurate mathematical model of the turbine speed Governor for use in computer power system simulations. The model shall be based on the requirements of the IEEE hydro Governor model set, and be usable with power system analysis software (PSAS), including the GE Energy Corp PSAS. Parameter range information shall be included with the model.

c. System Design Specification. Develop and submit detailed design memoranda which shall serve as the baseline for the hardware and software systems configuration and performance, for both [System Design Specification \(Kaplan\)](#) and [System Design Specification \(Francis\)](#) governors. These memoranda shall be consolidated into a single System Design Specification (SDS) document submitted only once for each type of governor, except that: for Task Orders following the initial Task Order for a turbine type, if the System Design Specification is different than the original submittal, furnish a revised System Design Specification for review and approval within 45 calendar days of award of that Task Order.

Each System Design Specification (SDS) shall include as a minimum:

1. Description and configuration of the system and identification of all deliverable hardware and software;
2. Memoranda providing detailed descriptions of the system operations required to perform each specification function;
3. Flow charts or equivalent high level diagrams of all application software used in the Governor provided;
4. Description of deliverable documentation;
5. Complete list of deliverables;
6. A detailed description of system interfaces to include the interface between the Governor and the power plant control system.

## 2.2 CABINETS

### 2.2.1 General

For installations where a cabinet separate from existing Governor Actuator



cabinets is preferred, provide the new Governor electronics equipment mounted in a separate cabinet to be located adjacent to, or near, the existing actuator cabinet. For Installations where a separate cabinet is not practical, provide the new Governor electronics equipment mounted in a cabinet located within the existing actuator cabinet, or appended to the front of an existing cabinet as appropriate. For a list of Projects and their preferred cabinets, see Attachment J3, Listing of Powerhouses.

#### 2.2.1.1 Stand-Alone Cabinets

Cabinets shall be industrial grade NEMA Type 12, except that opening access doors shall not require a tool. Maximum allowable size of stand-alone cabinets is 36 inches wide by 36 inches deep by 84 inches high. All of the following requirements describing instrumentation and controls shall apply to the new stand-alone cabinet. The new cabinet shall be coated using the Manufacturer's standard paint system, in a medium gray color.

#### 2.2.1.2 Cabinets Other Than Stand-Alone

Interior or exterior appended cabinets shall be industrial grade NEMA Type 13, effective against permitting entry of oil vapor. Submit suggested arrangement for approval along with the installation plan. See [Equipment Installation Plan](#). Maximum allowable size of these cabinets is 37 inches wide by 18 inches deep by 43 inches high. All of the following requirements describing instrumentation and controls shall apply to these cabinets. The new cabinet shall be coated using the Manufacturer's standard paint system, except that if cabinet material is stainless steel, with polished or brushed exterior, no paint finish will be required. Use of lead-based or lead containing paint will not be allowed.

### 2.2.2 Design and Construction

#### 2.2.2.1 Cabinet

The new cabinet shall provide isolation between the oil environment of the existing cabinet and the electronics for the new digital Governor. The enclosure shall be made up of smooth sheet steel panels with suitable bracing and framing to form a self-supporting dead-front type structure. Steel sheets shall be not lighter than No. 11 USS gage. The exterior panel surfaces shall be free of ridges, indentations, depressions, blisters, or bumps that produce highlights when painted (except see Paragraph: Cabinets Other Than Stand-Alone). Mount indicating and control devices and gauges in a symmetrical and convenient manner, and submit the proposed arrangement for approval.

#### 2.2.2.2 Inspection Doors

Inspection doors shall be provided for access to the new components. Doors shall be provided with latching devices and concealed hinges that will permit removal of the doors. Removable panel sections shall be provided. Exposed metal handles and other trim on the cabinet shall be finished stainless steel, or have polished chrome-plated finishes.

#### 2.2.2.3 Cabinet Ventilation

The ambient temperature of the area in which the digital Governor is to be installed can vary between 5 degrees C and 45 degrees C; circumstances where temperature excursions outside these limits can occur are possible. If ventilation is required to keep electronic circuits within their design

temperature range, provide ventilation intake openings in the front of the cabinet. Ventilation openings shall be of the louvered type and provided with screens and dust filters, and oil vapor proof filters if used in an other Than Stand-Alone Cabinet. If natural ventilation will not suffice, provide an exhaust fan powered from either the 125-volt DC system or the 120-volt ungrounded single phase preferred AC source, which is nominally single-phase, 60-Hz. Control the operation of any vent fan furnished thermostatically. "On-Automatic" control shall be provided for the fan. An alarm shall be provided if either the fan fails or the temperature rises above a predetermined set point. However, note that electronic controller equipment provided under this contract shall not require internal fans for cooling, nor will equipment requiring internal fans be accepted.

## 2.3 SPEED SENSING EQUIPMENT AND SWITCHES

### 2.3.1 Speed Signal Generator

#### 2.3.1.1 Speed Signal on Unit Start and Overspeed

On unit start the Governor shall control turbine speed using speed signals generated by two new redundant speed-signal probes from the new Speed Signal Generator (SSG). IEEE 125, 3.2.7. The SSG shall replace an existing Permanent Magnet Generator (PMG) and the associated speed switches. The SSG shall furnish two (redundant) speed signals to the new Governor controller. Unit overspeed signals beyond 110 percent of rated speed, up to at least 180 percent of rated speed, shall be derived from this source. Overspeed alarms beyond 110 percent of rated speed shall be independent of the Governor electronic controller (PLC) and shall provide contact outputs independent of the Governor. IEEE 125, 3.2.19.1.

#### 2.3.1.2 Unit Running and Excited Speed Signal

Provide the Governor with two frequency transducers connected to the generator PT circuit. Speed signal range of the frequency transducers shall be at least 90 percent to 110 percent of rated unit speed. The signal from either of these transducers shall be used by the Governor as the primary speed input whenever the generator field is energized and Turbine-generator speed is within 90 percent to 110 percent of rated speed. Transducer response time shall be adequate to provide required Governor speed of response to speed changes. The speed transducer signal source shall bumplessly transfer to the working transducer if the transducer in use fails. Generate an alarm if a transducer fails, whether or not it is the primary signal source.

#### 2.3.1.3 Spare Unassigned Speed Switches

Furnish at least 10 unassigned programmable contact outputs that can be set independently according to unit rotating speed. IEEE 125, 3.2.19.2. Contacts furnished shall be form C type, isolated from each other and from any ground. Contacts shall have a 10-ampere continuous current rating. The single-contact inductive load interrupting capacity shall be not less than N150 for 125 VDC or A150 for 120 VAC as defined in NEMA ICS 5, Section 4 CHARACTERISTICS AND RATINGS, and shown in Tables 1-4-1 and 1-4-2.

### 2.3.2 Wicket Gate Position Switches

Turbine Wicket Gate position switches (33 devices - IEEE C37.2) shall be provided through the Governor controller and shall be

adjustable/programmable. Gate position switch function shall be achieved by software and interposing relays with contacts rated as described in Paragraph: AUXILIARY AND INTERPOSING RELAYS. Additional outputs shall be provided to allow addition of 20 percent additional future switches, but no less than four.

### 2.3.3 Creep Detection and Indication

#### 2.3.3.1 Creep Detection After Unit Stops

Use the Governor controller inputs from the Speed Signal Generator to clearly indicate to the controller both the instant of dead stop, and the instant of breakaway of unit rotation. Provide unit creep detection using this source. [IEEE 125](#), 3.2.26. Enable creep detection when the Governor is given a stop command, speed has decreased below an adjustable creep speed threshold value, and a dead stop time has expired. The creep detection feature shall sense and alarm creeping rotation of the unit within three degrees of motion after dead stop. When creep is detected, issue an alarm, and start each of the bearing lubrication pumps. If unit speed is below a settable RPM, apply the brakes; if unit speed exceeds that RPM limit, do not apply the Generator brakes. Turn off creep detection on unit start. Design the equipment such that the position on which the unit stops cannot result in false operation of the creep detection alarm.

#### 2.3.3.2 Unit Fails to Completely Stop

Should the unit fail to reach zero rotation speed after a stop command, a separate alarm shall be provided that indicates this. On failure to reach zero speed, release or do not apply generator brakes, do not turn off bearing lubrication pumps or generator cooling water.

#### 2.3.4 Speed Signal Generator (SSG) Wiring Compartment

Furnish the SSG complete with a wiring compartment with conduit entrance holes, and terminal block points suitable for connecting all external circuits. The conduit entrance section of the compartment shall be removable as a unit and so constructed as to allow easy pulling of external circuit conductors or cables.

### 2.4 WATT TRANSDUCERS

#### 2.4.1 General

Furnish two transducers to supply generator power data input to the Governor process data input equipment you are to furnish. The transducers will be installed by others in existing plant equipment.

#### 2.4.2 Watt Transducer Characteristics

The transducers shall be the self powered type with at least plus or minus 0.25% of reading accuracy. Watt transducer signal source shall bumplessly transfer to the working transducer if the transducer in use fails. For Turbine-generators capable of condensing operation, the Watt transducers shall provide both positive and negative power flow data.

### 2.5 WICKET GATE POSITION INPUT DATA

Wicket Gate position data shall be provided for input into the Governor controller process I/O equipment. The Governor equipment and software

furnished shall use the linear displacement transducers specified below. However, furnish process I/O equipment with the Governor to allow later addition of three rotary transducers to determine Wicket Gate position information.

#### 2.5.1 Linear Displacement Transducers

##### 2.5.1.1 General

The Wicket Gate position indication source shall be from two track mounted magnetostrictive linear displacement transducers or approved equal connected to one of the Wicket Gate servomotors. Transducers are to be furnished under these Specifications; mounting hardware and physical installation will be furnished by others, using mounting equipment specifications and mounting design you furnish.

##### 2.5.1.2 Mounting

The mounting configuration shall be such that a single bracket or transducer linkage failure will not disable both transducers. Mounting design shall not contribute inaccuracy to output position data. Design and submit for approval suggested Gate position transducer, and the transducer mounting method. See SD02 - Wicket gate transducer installation.

##### 2.5.1.3 Transducer Characteristics

Resolution of the transducers supplied shall be at least 0.001 percent of full stroke; non-linearity shall not exceed 0.1 percent of full stroke; repeatability shall be within 0.01 percent of full stroke. Input reading accuracy of the transducer furnished shall not be less than 0.25 percent based on 16 bit digital representation of the transducer output signal.

#### 2.5.2 Rotary Gate Position Transducers

In the future, the Government may choose to implement a different method of measuring Gate position. Three separate rotary transducers mounted on Wicket Gate blade shafts may be used. The rotary transducers will have adequate resolution and accuracy to provide Gate position information with a full single turn resolution not less than 14 bits. Design and submit for approval suggested Gate position transducers and the transducer mounting method. See SD02 - Wicket gate transducer installation. Furnish process I/O with the controller that will accept inputs from the three rotary transducers.

#### 2.6 TURBINE RUNNER BLADE POSITION INPUT DATA (Kaplan)

##### 2.6.1 General

Turbine blade angle (position) data shall be provided for input into the Governor controller process I/O equipment. Blade position signal source shall be from two supplied rotary variable differential transformers (RVDT). The Governor equipment and software furnished shall use the rotary displacement transducers meeting requirements specified below.

##### 2.6.2 Mounting

Transducers are to be furnished under these Specifications; mounting hardware and physical installation will be furnished by others, using mounting equipment specifications and mounting design you furnish. The

transducers will be attached to the existing assemblies at the Kaplan oil head, and measure the blade angle (position). The mounting configuration shall be such that a single bracket or transducer linkage failure will not disable both transducers. Design and submit for approval suggested blade angle transducer, and the transducer mounting method. See SD02 - (Kaplan) Turbine Runner Blade angle transducer installation.

#### 2.6.3 Transducer Characteristics

Blade position transducers shall have a measured range of motion of not greater than zero degrees to 90 degrees of rotation. Resolution of the blade position transducers supplied shall be at least 0.001 percent of full scale; non-linearity shall not exceed 0.5 percent of full scale; repeatability shall be within 0.01 percent of full scale. Input reading accuracy of the transducer furnished shall not be less than plus or minus 0.25 percent based on 16 bit digital representation of the transducer output signal.

#### 2.7 Water Level Inputs

Make provisions for Forebay and Tailwater level inputs that are to be supplied by the Government. These inputs are nominally 4 to 20 milliamps, and the water elevations they represent will be supplied by the Government along with other Task Order information.

#### 2.8 GOVERNOR CONTROLS AND ACCESSORIES

##### 2.8.1 General Requirements

###### 2.8.1.1 General

Furnish drawings that clearly show all conduit and cable external to the Governor cabinets that may be required to connect the new equipment furnished under this specification with the existing Project equipment. Design drawings shall show how to install all equipment furnished that is required for annunciation and control remote from the Governor cabinets, including the new human-machine interface (HMI) equipment. The control equipment shall consist of a solid state programmable logic controller and process input/output equipment in a metal enclosure with all necessary interface equipment needed to adjust Governor control parameters.

###### 2.8.1.2 Governor Internal Power Supplies

Provide two redundant power supplies with the capability to operate normally and reliably from either power supply, and bumpless transfer capability if the power supply in use fails. Provide a remote indication of the failure of either power supply, whether or not it is in use at the time of failure.

##### 2.8.2 Performance

The Governor controls shall be of the three-term Proportional-Integral-Derivative (PID) type and be capable of combining unit load, speed error, speed adjustment, speed regulation, and stabilization signals to produce the most desirable response characteristics. The PID gain controls shall be independently adjustable and non-interacting. The range for adjustment shall be selected to suit the dynamic requirements of the controlled system.

### 2.8.3 Digital Controller

#### 2.8.3.1 General

The new Governor digital control equipment shall include a solid state programmable logic controller (PLC) system (IEC 61131-1). The PLC shall operate correctly over a temperature range of 0 deg C to +50 deg C, over a relative humidity range of 10 percent to 95 percent (non-condensing). The PLC provided shall not require a fan for its operation, and equipment requiring a fan shall not be acceptable. For PLC terms and definitions refer to IEC 61131-1, IEC 61131-2. Controller software shall be based on, and conform to the requirements of IEC 61131-3, and guidelines set forth in IEC 61131-8.

#### 2.8.3.2 Communication Facilities

For models and definitions refer to IEC 61131-5 and IEC 61131-3. Each Governor digital control system shall be equipped with at least three communications ports, in addition to a front panel port for diagnostic and maintenance purposes. Documentation for the communication interface hardware and communication protocol for all the ports shall be included in the Operation and Maintenance manuals. Provide an Ethernet port and communications software that enables the plant Data Acquisition and Control System (DACS) to communicate with the Governor as described in Paragraph: Communication with Plant Data Acquisition and Control System. An additional communication port shall provide communication with the flat panel displays and controller interface equipment that provide the Human-Machine Interface (HMI) function at the Governor and in the powerhouse control room as described in Paragraph: Flat Panel Display.

#### 2.8.3.3 Controller Software

Application Software. The Government shall have limited rights to the application software (IEC 61131-1) provided under this Contract. Those rights shall include complete copies of editable versions of all application software on electronically readable media, instructions for making software modifications to the application software, and the Manufacturer's instruction manuals for programming the controllers. Instruction manual content shall include instructions for constructing a complete independent program module, integrating a new module into the existing control software, accessing and using process input data, using control outputs, (analog and digital), performing diagnostics, loading the program module into the controller, and debugging the program. Each digital controller shall be supplied with 2 copies of the application software capable of accepting program changes that may be made by Government programmers.

Software Development Tools. Refer to IEC 61131-1. Furnish two complete suites of PLC Application Software Development Suite, including screen building software, instruction manuals that provide the capability to develop PLC software in the languages described and defined in IEC 61131-3, Programming Languages. The development tools shall be supplied with full capability, on a one-time cost basis, and require no periodic renewal costs.

Provide the Software Development Tools installed on stand-alone laptop personal computers of the latest type available at the time this contract is awarded. Each of the computers provided shall have a 17

inch display screen, built in keyboard and mouse, adequate hard disc capacity to hold all of the application software, the software development tools, the operating system, and incidental files with at least 100 percent spare unused capacity. Ancillary equipment shall include one DVD Read-Write drive, at least two USB 2.0 ports, and one 3.5 inch floppy disc drive. The development tools and editors required and furnished shall run on Windows operating systems. Laptop computers furnished shall be set up to correctly interface with, and transfer software and data between, the PLCs furnished under this Contract. Provide one PLC of the make and model offered along with the laptops. Laptop PCs provided shall not be equipped or configured for Internet access.

**PLC Application Software Block Diagrams.** Submit the software block diagram of the proposed software, for both Francis and Kaplan turbines, not later than 90 calendar days after award of the base contract. Submit three copies; one copy will be returned with review action noted.

#### 2.8.3.4 Application Software Design

Application Program design and implementation shall be in accordance with **IEC 61131-3** and **IEC 61131-8**. Design the application programming such that a startup or a reset of the digital controller, or a control mode change, will result in a bumpless state change with no sudden changes in Wicket Gate position, or turbine runner blade angle (Kaplan). **IEC 61362**, 4.8. A critical design criterion is that the application programming must be fail-safe. Critical control signals shall be monitored for signal integrity. The controller software shall allow adjustment of appropriate unit parameters while its turbine-generator is in operation. Provisions shall be made for separate off-line and on-line PID parameters in all modes of operation. Switching to the alternate parameter sets shall be automatic when changing operating modes. The Governor shall make a smooth, bumpless transition without sudden or excessive Gate, or turbine blade (Kaplan), movements during a parameter change.

#### 2.8.3.5 Programming Mode

It shall not be possible for the Governor to enter the programming mode unless its turbine-generator is shut down and a key-lock control switch is moved to the program position.

#### 2.8.3.6 Application Software Structure

Design and build the application software as recommended in **IEC 61131-3**, 1.4.3 et al, **IEC 61131-8**, 1.3, 2.5, 3. The Governor controls shall be programmed in ladder logic format. See **IEC 61131-3**, and **IEC 61131-8**. In general, provide the following functions as separate software entities. Each entity shall provide the specific control actions specified and other control actions required for proper operation of its turbine-generator from Governor equipment provided.

- (1) Unit Start. This function shall provide for automatic, semiautomatic, or manual starting.

The automatic start sequence will require the Governor controller to operate, automatically and in the proper sequence, unit ancillary equipment such as generator brakes, thrust bearing and turbine bearing oil pumps, generator cooling water valves, turbine pit warning siren, Gate lock solenoid, and shutdown solenoid. A

generalized start sequence follows, but will not be the same for all units for which new equipment may be ordered under these Specifications.

Normal Condition - quiescent state:

- a. Unit Indicating Lamp - Green light is on;
- b. 43LC (control location selector) is on "CENTRAL";
- c. Unit Start command received, sequence begins:

Unit Governor OK? (YES);  
Lockout - Unit or Transformer? (NO);  
Unit Protective Relay input clear? (YES);  
Transformer Protective Relay 1 input clear? (YES);  
Transformer Protective Relay 2 input clear? (YES);  
Turn off Unit Green indicating lamp;  
Turn on Unit Red indicating lamp;  
Turn on Generator cooling water;  
Turn on Turbine Pit siren {for 5 seconds;  
Start Thrust Bearing High Lift Oil Pump;  
Start Turbine Bearing Oil Pump;  
Five seconds later - stop Turbine Pit siren;  
Check Thrust Bearing Oil Pressure - OK? (YES);  
Check Turbine Bearing Oil Flow - OK? (YES);  
Wait 15 seconds;  
Release Generator Brakes;  
Brake Pressure zero? (YES);  
Raise Turbine Wicket Gate Limit to 30%;

Checks -

URX closed ? (YES)  
Turbine Wicket Gates open? (YES)  
Unit Speed at Speed-no-load? (YES)  
Generator Voltage nominal? (YES)  
Turn on Auto-synchronizer;  
Wait for unit breaker close - if it does not close within three

minutes, alarm -

If at any time during auto synch period a serious alarm comes in, shut down if the shutdown doesn't happen automatically, and prepare for restart. Do not restart if not commanded to restart.

In semiautomatic start mode, the governor shall initiate the commands to the ancillary equipment in the proper sequence, but shall pause between commands until issuance of the next sequential command is confirmed by Operator input through the HMI.

In manual start mode these commands to individual elements (e.g., thrust bearing oil pump start) will be entered by the Operator through the HMI. The start sequence will require checking equipment readiness and response to commands, oil pressure, and other factors as may be required at individual projects.

(2) Rough Zone Avoidance. The Governor shall have the ability to avoid, or move through rapidly, certain levels of turbine operation that produce excessive cavitation or vibration of the turbine-generator. On unit start, the Governor shall use turbine head as a factor to control the opening rate of the turbine Wicket Gates to



achieve a rapid and consistent time of acceleration from zero speed to rated speed.

(3) Synchronization using the Automatic Synchronizer. When the turbine-generator is running at speed-no-load, the Governor shall be capable of controlling the speed of the turbine generator to allow synchronizing the generator with the power system and closing the generator breaker in not more than three minutes after the automatic synchronizer (provided by others) is engaged. IEC 61362, 4.13.1.

(4) Manual Synchronization. When the turbine-generator is running at speed-no-load, the Governor shall be capable of accepting speed control commands from the manual Operator to allow synchronizing the generator with the power system and manually closing the generator breaker. IEC 61362, 3.2.

(5) Governor Control Constants. This function shall provide a method of programming and password controlled Operator entry for the Governor proportional, integral, derivative gains, and permanent speed droop. Governor control software shall have provisions for at least four sets of control constants, selectable by the Operator or by program control as needed for:

- a. unit startup and synchronization to the power system;
- b. normal operation connected to the bulk power system;
- c. islanded operation of the unit's plant;
- d. and, startup of the turbine-generator set with only Powerhouse battery power available. See IEEE 125, Paragraph 3.2.24.

Note that Requirement d. presupposes available governor hydraulic pressure and capacity adequate for at least one safe start/stop operation.

(6) Speed Reference. (IEEE 125, 2.2.19.) This function shall provide for inputs for:

- software adjustment for the maximum overspeed;
- speed reference limits for Governor control;
- limits on rate of change of Turbine-generator speed.

(7) Servomotor Limit Control. (IEEE 125, 2.1.) The maximum position for the starting servomotor limit and the rate of change shall be programmable, and allow modification by Operator entry. The rate of change of the servomotor limit after removal of the starting servomotor limit shall also be programmable. Provide a programmable Cushioning Time on servomotor closure (IEEE 125, 2.2.4.).

(8) Speed Regulation Control. (IEEE 125, 2.1, 2.2.5.) The Governor shall have the ability to adjust speed regulation from any value from 0 to 5 percent as a minimum.

(9) Speed Droop Control. (IEEE 125, 2.1, 2.2.5.) The Governor shall have the ability to adjust speed droop from any value from 0 to 15 percent as a minimum.

(10) Megawatt Setpoint. The Governor shall have the ability to accept a megawatt setpoint from local, remote control points, or the Plant DACS and ramp to that load at an adjustable ramp rate.

(11) Turbine Runner Blade Angle (Kaplan). Governor shall control the blade angle in accordance with a pre-determined relationship among turbine head, Wicket Gate opening, and blade angle.

(12) Other functional entities common or unique to the Governor provided.

#### 2.8.3.7 Controller Program Run Mode

In the program run mode, it shall be possible to change set points and dynamic adjustments while the unit is in operation. The run mode shall provide the following operating functions:

(1) Display all control parameters on the local and remote Human Machine Interface (HMI) devices. Control parameters shall be those values programmed or manually entered for use by the Governor control software.

(2) Display or adjust all allowed inputs, outputs and references from the local or remote HMI. This operating function shall allow the adjustment of speed references and shall limit entered settings to reasonable values.

(3) Display all Governor alarms and their cause on the local and remote HMI, and provide the alarm indication to project annunciators if specified. Provide the alarm information to local or remote project control systems using the required communication bus and protocol. This function shall cause the display of all existing alarm conditions, and be self-resetting.

(4) Permit changes in dynamic adjustments. This operating function shall allow proportional, integral, and derivative gain adjustments for on-line, off-line, and islanded operations. Changes in dynamic adjustments shall be accessible by Government personnel who have passwords of an acceptable security level. Such passwords shall be assigned by Project management. (See Paragraph: Application Software Structure, Governor Control Constants, above.)

(5) (Kaplan) Provide for Operator selection among four sets of tables describing the most efficient turbine runner blade angle setting for various head levels, and Wicket Gate openings. Control the blade angle in accordance with the table in use. The tables will be supplied by the Government, and can each be as large as ten columns by 100 rows of numbers, in floating point format. Provide a convenient means to download the tables to the Governor Controller from a laptop PC. Identity of the table in use shall be displayed on both HMI flat panel displays.

#### 2.8.3.8 Controller Diagnostic Software

Self tests and some diagnostics shall be automatically performed on power-up to verify that the Governor hardware and software is fully operational. After power-up, the digital controller shall continuously verify that it is performing all of its tasks without error. On-line

diagnostics, transducer input diagnostics, and off-line diagnostics shall be provided as follows:

(1) On-line Diagnostics. The digital control system shall include software to continuously monitor hardware and software performance in real time with minimum interference with normal system functions.

(2) Transducer Input Diagnostics. In addition to the speed signal generator inputs, two transducers shall be provided for each of the following inputs: speed, generator output power, Gate position, and turbine runner blade angle (Kaplan). The digital control system shall monitor the transducer pair outputs for agreement among themselves, and expected values based on operating conditions of the unit. Should transducer output differences exceed an adjustable value, control shall transfer to the transducer falling within the expected range, an alarm shall be set and a log entry shall identify the faulty transducer. If both transducers are operating within the expected range but have differing outputs exceeding a selectable percentage of reading, generate an alarm. If the transducers are outside the expected range, the control system shall initiate a unit emergency shutdown and a log entry shall identify the faulty transducer pair.

(3) Off-line Diagnostics. A comprehensive set of off-line diagnostic programs shall be supplied. These diagnostics shall permit complete maintenance of all hardware elements. The off-line diagnostics shall permit, to the maximum extent possible, the diagnosis and isolation of any hardware fault without requiring additional test equipment. Test points shall provide for insertions of appropriate test signals and for measuring the resulting output. All functional units shall be field repairable to the extent that replacement of a failed subassembly or module shall restore the unit to normal operating condition.

(4) Performance Diagnostics. Provide Governor performance diagnostic software that can be run by command from the HMI while the Governor is in the normal control mode. Performance diagnostics shall include:

Governor response to a step change in power demand;

Governor response to a step change in a speed reference change;

Governor response to a speed signal change;

Governor response to a shut-down signal.

Governor responses shall be indicated in graphical format on the HMI screen.

#### 2.8.4 Software Development or Modification

##### 2.8.4.1 General

Some of the software features and functions such as but not limited to the 3D Cam feature and the Main Unit Start/Stop function may require site specific modifications. The Contractor shall provide the services of a skilled programmer at the installation site to make the software changes or

additions. If such services are requested, the services will include furnishing programming tools and equipment such as laptop computers, PLC to PC interface and communication equipment, and documentation of all work attempted and accomplished.

#### 2.8.4.2 Services of a Skilled Programmer

When requested by the Contracting Officer, the Contractor shall provide the services of a skilled programmer who is familiar with the Governor controller software to make the requested software changes and modifications to continue the implementation, and/or continued operation of the Governor equipment furnished. See [Skilled Programmer Certifications](#). Provide personnel qualified and capable of software design and development, real time control applications, PLC programming, hardware testing, evaluation, and problem solving for hydroelectric Turbine Governor applications supporting unit power generation and control. Required areas of expertise and tasks to be performed may include, but are not limited to:

- Requirements definition, design, implementation planning, testing alternatives, acceptance testing, field implementation and startup, and post implementation reviews;

- Document all encountered and solved problems as a project record;

- Initial module testing during development, and final debugging and integration, are included;

- Electronically document all work on assigned applications and systems;

- Provide updates or new sections to existing O&M manuals;

- As new applications or modules are readied for implementation, the Contractor shall provide for their installation and implementation as directed by individual Task Orders, and the Contracting Officer.

#### 2.8.4.3 Skilled Programmer Expenses

Travel and per diem expenses for your skilled Programmer will be reimbursed in accordance with the Department of Defense Joint Travel Regulations. In the event of a work stoppage or significant interruption, the Contracting Officer may elect to direct the skilled Programmer to return to his home station, if the cost of travel is less than the cost of maintaining the skilled Programmer presence at the work location.

#### 2.8.4.4 Title to Software

Ownership of all software, including exclusive use of such software, produced under work procured by this Specification will reside with the Government.

#### 2.8.5 Installed Spares

The digital controller shall have the necessary input/output modules required to perform the specified functions plus the following installed spares: 20 percent of the total digital inputs with no less than 5 spare; 20 percent of the total digital (control contact) outputs with no less than 5 spares; 20 percent of the total analog inputs with no less than 5 spares; and 20 percent of the total analog outputs with no less than 5 spares.

#### 2.8.6 Retrofit Equipment Construction

The components for Governor control, electric speed switches, and speed indicator circuits shall either be mounted in drawers in the Governor cabinet, or arranged so that the components are readily accessible for service, inspection, and convenient parts replacement. If drawers are furnished, they shall be mounted on telescoping rails, which permit pulling the assemblies out for checking. Electrical interconnections between drawers and stationary terminal blocks shall be made with hinge wire, using suitable connectors to allow the drawers to be removed for inspection.

#### 2.8.7 Electrohydraulic Proportional Valve

##### 2.8.7.1 Proportional Valve Control

Electrohydraulic Gate [proportional valves](#), interface cards and distributing valve position feedback shall be provided to interface between the new controller and the existing distributing valves. The proportional valve shall convert the error signal from the digital controller to a hydraulic signal needed to control the Gate and blade distributing valves. The proportional valve shall have an electrical power source completely separate from the digital controller.

##### 2.8.7.2 Proportional Valve Trip

The Gate proportional valve shall be so designed that loss of its power source or the signal from the digital controller will cause it to trip, sending an emergency shutdown signal and immediately moving the turbine Wicket Gates to the shutdown position with full squeeze on the Gates. For Kaplan turbines, move the blades to the full-steep setting. An appropriate failure alarm will be generated and stored in the digital controller alarm log.

##### 2.8.7.3 Proportional Valve Oil Filters

Proportional valves shall incorporate duplex oil filter assemblies rated for 3000 psi working pressure and 10 gpm minimum flow. Filters shall have a beta 10 rating > 75. The Gate proportional valves and filter shall be mounted on a manifold block along with the emergency shutdown solenoid valve described below. The blade proportional valve (for Kaplan units) shall be either mounted on a separate manifold block with duplex filter or combined on a common manifold block with the Gate proportional valves.

#### 2.8.8 Turbine Wicket Gate Control

##### 2.8.8.1 Gate Limit Control

Furnish a means that will positively limit the Wicket Gate opening travel to any preset value. This Wicket Gate position limit shall function with the unit either on line or off line, and shall permit the Gate limit to be controlled either locally at the actuator control panel or remotely from the control room.

Wicket Gate limit movement rate shall also be adjustable such that it will allow setting the minimum operating time for the Gate limit to travel from fully closed (full 'squeeze') to full design open, and from full design open to fully closed (full 'squeeze'), at any desired value between 6 and 20 seconds.

The Wicket Gate-limit and the Wicket Gate position analog output shall function in such a manner that the signal is directly proportional to the Gate-limit setting and the Gate position respectively, without introducing time lag.

Provide means to limit the Wicket Gate opening during unit start and off-line operation to a preset value and to automatically allow the Gate to change to another preset value for on-line operation. Provide a 'coincidence indication' at the HMI that will show when the Gate Limit setting and the Wicket Gate opening coincide.

#### 2.8.8.2 Turbine Wicket Gate Operation

The Governor shall control the rate of opening, and the rate of closure, of the turbine Wicket Gates. Gate closure time shall be adjustable over the range of six to 20 seconds for Gate positions from 75 percent open to 25 percent open. Gate opening time shall be set as required for safe and stable operation of the turbine while meeting requirements described herein.

#### 2.8.9 Speed Adjust

A speed adjust mechanism shall be provided which can be manually operated from the Governor flat panel displays (HMI), through existing controls (that will be retained) or through the interface with the Plant DACS, to change the Governor speed reference (IEEE 125, 2.2.19). The speed adjust mechanism shall be suitable for use with existing synchronizing equipment. With the speed regulation set for 5 percent, it shall be possible to adjust the minimum time to change the power output from maximum to zero power output to any desired value between 20 and 40 seconds. Speed level control shall cover the range from 85 percent rated speed at no load and zero speed regulation to 105 percent rated speed at rated load and maximum speed regulation.

#### 2.8.10 Speed Regulation

A means shall be provided at the flat panel displays for setting the value for speed regulation of the unit (IEEE 125, 2.2.5.2). The amount of regulation shall be adjustable from 0 to 5 percent as a minimum.

#### 2.8.11 Automatic Shutdown Mechanism

##### 2.8.11.1 Shutdown Governor Controller

The existing automatic shutdown mechanism will be removed. A solenoid-operated mechanism (Device No. 65SD) shall be furnished which when energized will permit the Wicket Gates to be controlled normally, and when deenergized will cause the Wicket Gates to close at the normal rate of closure, including the cushioning time. The mechanism will be used for starting and stopping the unit by remote control and for emergency shutdown of the unit by action of automatic protective relays and safety features protecting the generator, turbine, Governor equipment and transformer. The mechanism shall be provided with 3 spare sets of independent form C contacts which shall be adjustable to provide either normally open or normally closed contacts, as required.

##### 2.8.11.2 Emergency Shutdown

The required independent mechanical overspeed switch function shall cause

deenergization of the shutdown solenoid any time unit rotational speed exceeds 1.3 times normal speed. The governor controls shall be designed such that governor controller failure, loss of power to the Governor, or failure of the solenoid coil will deenergize the shutdown solenoid, cause a trip output to the unit breaker, shut down the unit, drive the turbine runner blades to the full-stop position (Kaplan), and annunciate the failure.

#### 2.8.12 Governor Control Modes

The Governor control mode shall be selectable by means of a Governor mode control from the Governor Human-Machine Interface (HMI) flat panel displays. Provide continuous information on the flat panel displays showing the operative Governor control mode.

##### 2.8.12.1 Manual Governor Control

Manual Governor control shall be available, and selectable from the flat panel displays. IEC 61362, 4.6. Provide manual control of the governor functions for testing and maintenance, including:

1. Turbine Wicket Gate operation;
2. Turbine runner blade angle operation (Kaplan);
3. Generator brakes;
4. Generator cooling water;
5. Turbine-generator lube oil pumps;
6. Thrust bearing high pressure oil pump (high lift pump);
7. Individual operations of Turbine-generator start sequence controls.

This control function shall permit limited operation of the turbine for testing while in operation. The manual control shall be continuous for the full opening and closing strokes of the Gate servomotor, and turbine runner blades (Kaplan), and provide Wicket Gate timing tests, including cushioning time. Wicket Gate servomotors have no internal valving for deceleration near the end of the servo stroke, so the Governor must provide a cushioning time (IEEE 125, 2.2.4) in both normal and manual operating modes. Gate servomotor operating speed shall be controlled by the Governor control software with speed set from the HMI, with operating speed continuously variable up to a maximum safe limit. For Kaplan type turbines, this control mode will be used to perform efficiency testing commonly referred to as "Index Tests".

##### 2.8.12.2 Maintenance Governor Control

Maintenance control shall allow an Operator to manually move the turbine Wicket Gates, or turbine runner blades (Kaplan), to any position within their normal travel limits. This mode will not be used for operation of the Turbine-generator sets, but only for maintenance purposes while the unit is unwatered. Maintenance Governor control shall be available and selectable from the HMI flat panel displays, but not available while the unit is in normal operation.

#### 2.8.12.3 Automatic Governor Control

Automatic operation will be the normal Governor control mode. In the automatic mode the Governor shall perform all specified and necessary speed and regulation control of its Turbine-generator set without Operator intervention. For Kaplan turbines, normal operation will include a means to achieve the most efficient operating point over the load range above the Turbine rough zone, and at and below maximum safe power output. Accomplish this by selecting and setting the optimum turbine runner blade angle for the instant generator output power, head, and Wicket Gate opening, according to Government-furnished tables. The tables will be supplied by the Government, and can each be as large as ten columns by 100 rows of numbers, in floating point format. These tables will show the optimum relationship among the variables of head, Wicket Gate opening, and blade angle, and accurate interpolation between the discrete values shown in the tables will be required of the control software. This function is commonly known as a "three dimensional cam" or "3-D Cam". The Government will furnish at least two such tables for every individual Turbine, up to a maximum of four tables. Make provisions for entering four of these tables in the Governor controller permanent memory and selecting the table for use through the HMI flat panel display. It will be necessary to use interpolation techniques between discrete points in these tables to achieve "smooth curve" operation. Submit your interpolation algorithm for approval per [PLC Application Software - Table Interpolation Method](#).

#### 2.8.12.4 Condensing Mode of Operation

In the condensing mode of operation, the unit is started normally, brought to synchronous speed, and synchronized to the bulk power distribution system. While the unit remains synchronized to the system, the Wicket Gates are closed, and the turbine water depression system forces the water away from, and below, the turbine blades (runner) so the runner rotates in air. [IEC 61362](#), 4.15.6. The generator draws a small amount of power from the power system in this mode, and supplies only reactive power to the bulk power distribution system.

#### 2.8.12.5 Provisions for Future Addition

The Government intends to add an operating efficiency determination element to the Governor control software in the future. To that end, make provisions in the process I/O equipment provided with the Governor to accept signals from a Winter-Kennedy Tap differential pressure transducer. Provide an input point for a four to 20 milliamp signal from the Winter-Kennedy Tap differential pressure transducer using a compliance voltage of a regulated ten volts sourced by the Governor Controller process I/O equipment. The transducer and the software to use the signals will be provided by the Government; however, space in the process data base shall be set aside for the data point. Provide not less than 30 percent spare memory capacity over and above capacity required under other provisions of these Specifications to accommodate this future function.

#### 2.8.13 Human Machine Interface (HMI) Equipment

##### 2.8.13.1 General

Existing Governor analog indicating devices mounted on the front of the existing Governor cabinets shall be replaced with new flat panel displays, which function as a Human Machine Interface (HMI) device with the Governor control PLC, as indicated. Each display shall be color graphic touch



screen type capable of displaying 256 colors with a resolution of at least 640 by 480 pixels, and a minimum display size of 11 inches by 13.5 inches.

#### 2.8.13.2 Screen Building Software

Three complete copies of screen display building software shall be supplied to the Government with no licensing, or recurring cost, requirements.

#### 2.8.13.3 Flat Panel Display

For each Governor, provide a new Flat Panel Display Human Machine Interface (HMI) at the Governor control board. Governor control, parameter entry, and data display shall be possible from either this display, or the HMI display arrangement provided for the Control Room installation. Access to the parameter entry capability shall be password protected. (See Paragraph: Application Software Structure, Governor Control Constants, above.) Each Powerhouse, except those with only one Main Generator Unit, will require not more than one HMI for each eight Main Generator Units for Control Room installation. This requirement will be covered in the individual Task Order for the particular Plant. Refer to Attachment J3, Listing of Powerhouses, for the number of Control Room HMI devices required.

#### 2.8.13.4 Screen Displays

Screen layouts provided initially shall include graphical display of all inputs, status of all control outputs, and shall include but not be limited to:

- Generator output;
- speed level indicator;
- speed indicator;
- Gate position indicator;
- Gate limit indicator;
- blade angle indicator (Kaplan);
- speed regulation setting;
- speed droop setting;
- all start and stop control functions.

#### 2.8.13.5 Control Room HMI Equipment

Control Room Flat Panel Display (HMI) equipment shall be selectably switchable among each of the Governors among its group of not more than eight Governors. The identity of the Governor currently connected to the Flat Panel Display shall be prominently displayed on an indicating device mounted at the top edge of the Control Room Flat Panel Display.

#### 2.8.13.6 Control Room HMI Communication Equipment

Furnish a complete fiber optic data link, less the fiber optic cable itself, to connect each governor to the HMI multiplex equipment in the Control Room. Furnish specifications for the fiber optic cable and the

terminations required with [SD-03 Human-Machine Interface \(HMI\) Equipment and Software](#) for each Task Order received. The fiber optic cable and connectors will be procured and installed by the separate Installation Contractor.

#### 2.8.13.7 Control Room Equipment Power

HMI equipment furnished for installation in the Control Room shall be powered from the same Powerhouse battery as the Governor equipment, except that the Control Room source may be from a separate branch circuit. Specify the amount of power required by the Control Room HMI equipment with [SD-03 Human-Machine Interface \(HMI\) Equipment and Software](#) for each Task Order received.

#### 2.8.14 Communication with Plant Data Acquisition and Control System

##### 2.8.14.1 Communication Equipment

Provide hardware and software to allow intercommunication with an existing Plant Data Acquisition and Control System (DACS). The Governor shall provide functional software to communicate with the DACS, furnish data and status information to the DACS on command from the DACS, and accept and execute control commands from the DACS. Furnish the control PLC with fiber optic data link equipment similar to that used for the Control Room HMI. This equipment will be used by the Government at a later time to connect each governor to the DACS. Furnish specifications for the fiber optic cable and the terminations required with [SD-03 Human-Machine Interface \(HMI\) Equipment and Software](#) for each Task Order received. The fiber optic cable and connectors will be procured and installed by the Government at a later time.

##### 2.8.14.2 Governor Data Exchange

All Governor data and status shall be available for monitoring by the DACS using 100 MB/s Ethernet. Data and outputs available shall include as a minimum the following:

- Turbine-Generator Start/Stop Command;
- Wicket Gate position data;
- Turbine Runner Blade Angle (Kaplan);
- Wicket Gate position control;
- Wicket Gate limit data;
- Wicket Gate limit control;
- Turbine-Generator Speed Signal;
- Generator load raise and lower;
- Generator Brake Control and Status;
- Generator Output Frequency;
- Speed Regulation Setting (percent);
- Megawatt Setpoint;
- Megawatts from primary and redundant transducers;
- Forebay Elevation;
- Tailwater Elevation;
- Gross Head;
- Alarms.

The Governor shall have the capability of accepting additional future communication channels using Modbus, Profibus, or DNP3 protocols at one of the standard data rates.

### 2.8.15 Analog Outputs

With the process Input/Output (I/O) equipment supplied, furnish eight programmable analog outputs capable of providing a range of four to 20 milliamps with a compliance voltage of maximum ten volts. These outputs will be used to represent quantities such as Gate Position, Gate Limit Position, and Unit Speed.

## 2.9 NAMEPLATES

Each item of equipment mounted on the Governor cabinet which does not have a suitable visible designation included as an integral part of the device shall be provided with an engraved nameplate attached to the item with mechanical fasteners (e.g., screws or rivets, as appropriate). All dials, gauges, and nameplates shall be marked with the nomenclature and units of measure used in the United States.

## 2.10 WIRING AND DEVICES

### 2.10.1 General

Wiring of electronic component assemblies and interconnecting wire shall meet environment, voltage, and power requirements.

#### 2.10.1.1 Oil Free Areas

Except for internal wiring of approved devices and wiring of electronic component assemblies, wiring in oil-free areas shall be type SIS conforming to the applicable requirements of NEMA WC 70 for 600-volt single conductor power cable. External cabling shall comply with the requirements of SECTION 26 00 00.00 25.

#### 2.10.1.2 Areas Exposed to Oil Vapors

Wiring in areas exposed to oil or oil vapor shall be type MTW, column A heavy insulation, conforming to the applicable requirements of NEMA WC 70 for 600-volt single conductor power cable. Minimum wire size shall be No. 14 AWG, Class B or C stranding.

#### 2.10.1.3 Shielded Wire

Shielded wiring shall be provided where required to meet transient immunity requirements, and where installed with control power or annunciator cables shall have 600 volt insulation.

#### 2.10.1.4 Hinge Wiring

Hinge wire with Class G or K stranding shall be used in the portions of circuits between stationary panels and going to devices on hinged panels, swinging panels, or swinging doors, and shall be formed in vertical wire loops that shall provide rotation around the longitudinal axis of the conductors.

### 2.10.2 Internal Cabinet Wiring, Duct and Channel System

This Paragraph applies only to enclosures furnished under this Contract. Installation work will be done by others.

#### 2.10.2.1 Arrangement

Internal wiring shall be arranged so that all external connections will be made in the terminal compartments of the Governor cabinet. Provide wiring duct and channel system arranged to provide easy access for inspection and replacement of wiring in the Governor cabinet. Insofar as practical, install the wiring in the channels and ducts.

#### 2.10.2.2 Conduit

Enclosures furnished under this Contract must provide for connection to either rigid galvanized conduit or liquid tight flexible conduit furnished by others. SO cord shall not be used to connect devices. Conduit used inside enclosures furnished under this Contract shall be either: rigid galvanized steel conforming to ANSI C80.1; or flexible steel conduit conforming to UL No. 1 with hot dip galvanized steel core, internal bare copper ground wire not less than #12 AWG, and water proof extruded PVC cover, using threaded fittings conforming to NEMA FB 1, UL 467, and UL 514B.

#### 2.10.2.3 Wireway and Ducts

Provide oil-vapor-tight wireways or cable ducts where external wire entering the governor cabinet terminal compartments may be exposed to oil vapors. The wireway shall be provided with covers and each wire shall be protected by a grommet where it leaves a wireway or duct.

#### 2.10.2.4 Exposed Wire and Cable

Wiring, when not installed in channels or ducts, shall be formed into compact wire bundles bound together and supported. Binding and supports shall not cause damage or cold flow of the insulation. Groups of exposed wires shall be run straight horizontally or vertically with short-radius right angle bends. Wiring supports shall be of heavy-gage rustproof material or steel with a rust-resistant finish equivalent to cadmium-zinc plating.

#### 2.10.2.5 Wire Continuity and Terminations

There shall be no splices in the wiring and all connections shall be made at device terminal studs or at terminal blocks with ring-tongue indented terminal connectors. Screw terminals shall be provided with toothed lockwashers. All stud type terminals shall be provided with contact nuts and either locking nuts or lock washers.

#### 2.10.2.6 Wire Identification

All wires installed by the Contractor shall be identified at both ends with wire markers labeled with the wire identification shown on the drawings. Wire markers shall be close fitting, shrink tube sleeve-type with durable, legible colors and printing. The markers shall be resistant to change due to age, heat, or contact with oil vapor.

### 2.10.3 Wiring Arrangement

#### 2.10.3.1 Cable Support

Provisions shall be made for training and supporting incoming external cables from the point of entrance to the termination on the terminal blocks. Special attention shall be given to internal wiring and terminal

arrangement to permit the individual conductors of an external cable to be conveniently grouped for connection to adjacent terminal points.

#### 2.10.3.2 Cable Entrance Locations

Entrance locations shall be indicated on the shop drawings submitted under Paragraph 1.3 SUBMITTALS for entrance of all external cables. Do not terminate any internal cabinet wiring on the external cable side of terminal blocks.

#### 2.10.3.3 Terminals

The terminal point designations used on the wiring diagrams and printed on terminal block marking strips may be according to the Contractor's standard practice. Provide terminals and wiring for the future connection of remote circuits to all control device spare contacts. Spare terminal blocks intended for Current Transformer terminations shall be of the short circuiting type described below.

### 2.11 TERMINAL BLOCKS

#### 2.11.1 General

Each terminal screw or stud shall be not less than No. 10 in size having length and space for connecting at least two No. 12 AWG conductors to each terminal. At least 10 percent extra terminals shall be provided for each type of terminal block installed. Electronic component assemblies shall be provided with terminal blocks or connectors adequate to accommodate the incoming wiring.

#### 2.11.2 Control Wiring Terminal Blocks

Terminal blocks for control wiring, except terminal blocks for electronic component assemblies, shall be of the type allowing easy disconnect of the external plant circuit from the Governor control output circuit.

Acceptable Terminal blocks for this use are:

Entrelec Disconnect Blocks, with  
Entrelec parts:  
Disconnect-----115.529.15----type..M6/8.STP1  
Din Rail-----173.220.05----type..PR30  
End Section-----113.137.02----type..FEMT1  
End Stop-----103.002.26----type..BAM

#### 2.11.3 Current Transformer Terminal Blocks

Short circuiting type terminal blocks shall be furnished for all current transformer secondary leads with following characteristics:

Terminal block base shall be general purpose phenolic, rated at least 150 deg C., 600 Volts;

Terminal blocks shall be not less than 12 pole, 8.25 inches long, two inches wide, 1.19 inches deep, with two screw terminals per pole, 0.625 inch separation per pole, with full height barriers between poles;

All terminals shall be fully isolated from each other and from the surface on which the terminal block is mounted;

Connectors shall be nickel plated brass;

Terminal screws shall be nickel plated brass, size 10-32;

The terminals shall be removable binding, fillister, washer head screw type;

Terminals shall be rated 30 Amperes, accept wire size ring tongue terminals ranging from #10 AWG to #16 AWG;

Provisions for short circuiting together all leads from each current transformer without first opening any circuit;

Spacing between wires shall be not less than five-eighths inch;

Each terminal block shall have a full length marking strip;

Each terminal block shall mount using a screw at each end, electrically isolated from any terminal, centered on the long axis of the block, extending no more than 0.3 inch into block body.

Use Marathon Special Products 1500 Series 1500SC, short circuiting block, with labeling strip, or approved equal.

## 2.12 AUXILIARY AND INTERPOSING RELAYS

Auxiliary and interposing relays shall be enclosed, self-reset, and shall be provided with a minimum of four contacts easily convertible from normally open to normally closed. Relay coils and contacts shall be rated for continuous operation in 125 volt D.C. or 120 volt AC circuits as required. Relay coils used in 125 volt DC circuits shall operate reliably with continuously applied voltage between 105 and 140 volts DC. All relay coils shall be furnished with surge suppression devices to limit surge voltages which may be generated when the coil circuits are de-energized. Contact ratings shall comply with [NEMA ICS 5](#), Part 1 and Part 2. The single-contact inductive load interrupting capacity shall be not less than N150 for 125 VDC or A150 for 120 VAC as defined in [NEMA ICS 5](#), Section 4 CHARACTERISTICS AND RATINGS, and shown in Tables 1-4-1 and 1-4-2. All relays shall incorporate diode pilot lights to indicate the relay state.

## 2.13 CABINET LIGHTING AND CONVENIENCE OUTLETS

For cabinets supplied under this Specification, cabinet outlets, lighting fixtures and lighting control switches shall be provided at approved locations. Convenience outlet and lighting circuits shall operate from 120 volt, single phase, 60 Hz sources provided by the Government, and shall be wired in rigid conduit and terminated on terminal blocks. Lighting switches shall be rated 20 amperes and shall conform to UL 20. Receptacles shall be rated 20 amperes. Lighting fixtures shall be enclosed and gasketed fluorescent type, equipped with compact fluorescent bulbs.

## 2.14 SPARE PARTS

### 2.14.1 Spare Parts Furnished by Contractor

Each spare part shall have an attached identifier listing the part number, vendor or manufacturer and a contact address and phone number. Furnish spare parts as follows:

a. Mechanical items

- (1) One each of the number of complete proportional valve assemblies of each type furnished under a Task Order, including valve interface card and valve position transducers.
- (2) Two each of every new mechanical part installed excluding general hardware.
- (3) Ten filter elements of each type for single proportional valve filters.
- (4) Ten filter elements for new duplex proportional valve oil filters.

b. Electrical items-

- (1) Two sets of zero velocity pickups (electronic sensor) for speed sensing generator.
- (2) One complete Governor controller (PLC) with input and output modules.
- (3) One power supply of each type furnished.
- (4) One electric inverter, if applicable.
- (5) Two printed-circuit card receptacles for each type furnished.
- (6) Ten relays of each type provided.
- (7) Five coils for each type of solenoid-operated device.
- (8) Six transducers of each type including: Gate position indication; blade position indication (Kaplan); oil pressure and water level sensors.
- (9) Four meter/indicating instruments of each type furnished.
- (10) Two flat panel displays and controllers.
- (11) Twenty-four fuses of each type.

The spare parts complement is to be delivered at the Project site coincident with first delivery of the Governor equipment to the Project under each Task Order.

2.14.2 Spare Part Quality

All spare parts furnished shall be interchangeable with and shall be made of the same materials and workmanship as the corresponding parts of the Governors furnished under this specification.

## PART 3 EXECUTION

### 3.1 INSTALLATION

#### 3.1.1 General

##### 3.1.1.1 Services of Erection Engineer

Note that installation of Governor equipment furnished under these Specifications is not a part of these Specifications, or a resulting Contract. Installation of equipment you furnish is to be done by an Installation Contractor, under a separate contract. When requested by the Contracting Officer, you are to furnish the services of a fully qualified Erection Engineer at the installation site. The Erection Engineer may be asked to advise the Government on installation procedures and work. The Erection Engineer may be required to witness field tests during installation, and tests after installation is complete, and to witness such other tests or activities as may be required by the Contracting Officer in accordance with applicable provisions of the Contract. Submit for approval the qualifications and [Erection Engineer Certifications](#) of each Erection Engineer you intend to provide for each Governor furnished. See Paragraph: 'Erection Engineer Certifications' in 'SD-07 Certificates' this Section, and Specifications Section C.

##### 3.1.1.2 Erection Engineer Expenses

Travel and per diem expenses for your Erection Engineer will be reimbursed in accordance with the Department of Defense Joint Travel Regulations. In the event of a work stoppage or significant interruption, the Contracting Officer may elect to direct the Erection Engineer to return to his home station, if the cost of travel is less than the cost of maintaining the Erection Engineer presence at the work location.

##### 3.1.2 Electrical

The Installation Contractor will provide all electrical wire, cable and labor required to connect the new Governor system to make it fully operational. Installation services required will include installing internal and external Governor Cabinets, all equipment and devices mounted externally to Governor Cabinets and shipped separately including: wiring, Governor mounted display, control and Human-Machine Interface devices, transducers including related cable and conduit, as well as control switches and Human-Machine Interface equipment located in the control room. The supply and installation of external cabling and raceways will conform to the requirements of SECTION 26 00 00.00.

### 3.2 FACTORY AND FIELD TESTS

#### 3.2.1 General

Factory and field tests of the Governor shall be made in accordance with [ASME PTC 29](#), and [IEC 60308](#), except as definitely stated herein. The waiver of any tests or the observance thereof by a Government witness shall not relieve the Contractor of the responsibility of meeting the requirements of the specification. All test equipment, instruments, and personnel for factory tests shall be furnished by the Contractor. Both the [Factory Tests](#) and [Field Tests](#) shall be documented in test reports to be submitted for approval.



### 3.2.2 Factory Tests

#### 3.2.2.1 Control Equipment

The Governor control equipment shall be completely assembled in the Contractor's shop and tested, insofar as practical. Factory testing shall not be initiated prior to approval of the test procedure. The Contractor shall notify the Contracting Officer, in writing, 30 calendar days in advance of factory testing so that the tests may be observed by the Government except that tests to be performed outside the United States shall require a notification of no less than 45 calendar days prior to the factory testing. Factory tests shall include but not be limited to functionality of Governor controls such as unit start/stop, generator braking, generation modes, communications and failure monitoring.

#### 3.2.2.2 Wiring Tests

Device nameplate markings, device identification, wire markers, and terminal block wire designations shall be checked. Insofar as practical, wiring shall be given point-to-point circuit continuity tests. Dielectric tests shall be performed to determine the adequacy of the insulation of wiring. After all wiring has been installed, it shall be subjected to dielectric tests in accordance with Clause 8, Performance requirements and tests, Section 8.4 and Table 8-4 of [NEMA ICS 1](#). All necessary precautions shall be taken to prevent damage to equipment not designed or intended to withstand this test, in accordance with provisions cited in the referenced NEMA Standard. All grounding connections to the ground bus shall be removed during the test.

#### 3.2.2.3 Devices Adjustment and Testing

All devices requiring adjustment or verification of settings shall be checked for range of adjustment and then given final adjustment as required so that a minimum of further adjustment will be required after erection in the field. Operational tests shall be performed on the following equipment and devices:

- a. Speed switches;
- b. Local and remote flat panel displays (HMI);
- c. Automatic-manual Governor control transfer;
- d. Maintenance Governor control;
- e. Ramp rates on all ramped functions;
- f. Solenoid operated devices;
- g. Limiting provisions;
- h. Auxiliary switches or relays;
- i. Gate position switches;
- j. Transducers;
- k. Power supplies;

1. Meters.

- 3.2.3 Field Tests

- 3.2.3.1 Point-to-Point Wiring Check

When each new Governor installation is complete, the Installation Contractor will be required to make a point-to-point check of the wire and cable connections to ensure that wiring is complete, correct, and correctly labeled. If requested by the Contracting Officer, your Erection Engineer shall witness this wiring check.

- 3.2.3.2 Quality Assurance Inspection

Your Erection Engineer may be requested by the Contracting Officer to assist in the inspection of the equipment after the Installation Contractor notifies the Government that the installation work is complete. Within seven calendar days the Government will inspect the installation and if it is found to meet specification requirements for quality of installation work, it will be accepted for operational testing. If it does not meet specification requirements, the Contracting Officer will direct the Installation Contractor to make corrections and again request inspection by the Government.

- 3.2.3.3 Operational Field Tests

The following operational functions of auxiliary equipment in each Governor shall be field tested to demonstrate correct operation in all operating modes. These tests will be witnessed by the Government unless waived in writing.

- a. Speed switches;
- b. Local and remote flat panel displays (HMI);
- c. Turbine-generator synchronizing to the power system;
- d. Automatic-manual Governor control transfer devices;
- e. Manual Governor control devices;
- f. Control switches;
- g. Solenoid-operated devices;
- h. Limiting provisions;
- i. Auxiliary switches;
- j. Gate position switches;
- k. Pressure transducers and switches;
- l. 3-D cam operation and accuracy of performance;
- m. Electronic controller;
- n. Gate limit;

- o. Gate position;
- p. Operation on normal and backup power source;
- q. Governor tuning on line and off line.

#### 3.2.3.4 Governor Performance Field Tests

These testing requirements apply to each individual Project Task Order that may be issued.

Testing of the first retrofitted Governor installed may be witnessed by your Erection Engineer, and the Governor shall demonstrate satisfactory performance before work is done on any other Governors. The Governor shall be tested in accordance with [ASME PTC 29](#) and [IEC 60308](#), and your approved procedure. In the event your procedure varies from cited Standards, the Standards shall take precedence. Recorders for response tests shall be the digital type. Your Governor Erecting Engineer shall be present and witness all field tests if requested by the Contracting Officer.

- a. Steady State Governing Speed Band - Determine according to [IEEE 125](#), Paragraph 2.2.16.
- b. Power Stability Index - Determine according to [IEEE 125](#), Paragraph 2.2.17.
- c. Load Rejection Stability - Determine from speed response following load rejection. [IEEE 125](#), part 4.1.2 Load Rejection.
- d. Governor Load Damping - Determine from on-line load step response.
- e. Speed Signal - Tests shall be performed, or data on similar equipment submitted, to show that output of the speed sensing elements varies essentially directly with the speed of the generator shaft for all rates of acceleration and deceleration up to 15 percent of rated speed per second.
- f. Dead Time - Dead time shall be determined by measurement of servo closing characteristic following a load rejection of not less than 10% rated. The dead time shall not exceed the time stated in Paragraph: Governor Dead Time.
- g. Gate-Control Dead Band - The actual Gate dead band need not be determined if tests demonstrate that the dead band does not exceed the limit stated in Paragraph: Gate-Control Dead Band.

#### 3.2.4 Availability Test

After successful completion of the field tests, the Government will conduct an Availability Test. The test shall be conducted under regular plant operating conditions, on a 24-hour per day, 7-day per week basis with the governor performing all specified functions. Operation of the unit will be by Government operators under the technical oversight of your Erection Engineer. The Erection Engineer shall be fully responsible for the execution and results of the test. The governor equipment supplied under this Contract shall demonstrate an availability of 99.9 percent, or greater, during the test.

#### 3.2.4.1 Availability Test Duration

The duration of the test shall be 1000 hours, which shall be determined from the sum of uptime and downtime. The maximum cumulative value of downtime shall not exceed 0.5 hour. Downtime shall be measured from the time your repair representative arrives at the site, until the malfunction is corrected and the Governor is restored to service. A malfunction that degrades performance shall be any failure of the Contractor's product that results in loss of control or in shutdown of the unit. Uptime shall be the operating time during which the governor provides fully acceptable control, even though some redundant or non-critical components may be out of service.

#### 3.2.4.2 Test Interruption

If the test must be suspended as the result of the failure of Government-owned equipment (provided the failure was not caused by the Contractor's product), or if the suspension is not the fault of the Contractor, that period shall be classified as administrative time. Administrative time shall not be counted as uptime or downtime, and an administrative-time period shall not be counted as a discontinuity in the test duration.

#### 3.2.4.3 Test Failure

Failure of the Availability Test shall be defined as any complete loss of control of the Governor equipment, failure of the Governor to correctly control the turbine-generator speed and response as required, failure of either HMI to communicate with the Governor, or a cumulative down-time exceeding 1 hour.

#### 3.2.4.4 Repeat of Availability Test

Failure of the Availability Test shall require correction of the fault that caused the failure within 60 calendar days of the date of test cessation. The Availability Test shall be restarted with a clock time of zero when the fault correction has been accepted by the Contracting Officer.

### 3.3 OPERATION AND MAINTENANCE MANUALS

The [Operation and Maintenance Manuals](#) shall be submitted in accordance with SECTIONS [01 30 60.00 25](#) and [01 33 00](#).

### 3.4 [CONTRACTOR FURNISHED TRAINING](#) OF GOVERNMENT PERSONNEL

#### 3.4.1 General

The Contractor shall conduct training classes at each Project, tailored to be specific to the Governor furnished. Course Outline and subject matter for each course shall be submitted and approved prior to the starting date of the course. The "Approved" Operations and Maintenance Manual shall be incorporated into the training materials. Government project personnel may videotape all training sessions presented by the Contractor for future use by the Government.

#### 3.4.2 Operator Training

Operator Training shall be of approximately 24 hours duration for approximately 10 Government personnel. Operator training shall include theory of basic Governor electrical, electronic, and hydraulic control

circuits and systems; Governor trouble analysis; and actions available to an Operator to correct minor problems.

#### 3.4.3 Maintenance Training

Maintenance Training shall be of approximately 40 hours duration, for approximately six Government personnel. The courses shall include Governor control system design; theory of basic Governor electrical, electronic, and hydraulic control circuits and systems; trouble shooting of printed circuit cards; programming the controller; major maintenance tasks; and Governor trouble analysis.

-- End of Section --

## **SECTION D**

### **PACKAGING AND MARKING**

- D.1 Packaging and Marking
- D.2 252.211-7003 Item Identification and Valuation

## **SECTION D**

### **PACKAGING AND MARKING**

#### **D.1 Packaging and Marking**

Packaging and marking requirements shall be specified on an individual task order basis.

#### **D.2 252.211-7003 Item Identification and Valuation**

Note: This clause will be tailored on an individual task order basis where applicable.

##### **252.211-7003 ITEM IDENTIFICATION AND VALUATION (JUN 2005)**

(a) Definitions. As used in this clause'

Automatic identification device means a device, such as a reader or interrogator, used to retrieve data encoded on machine-readable media.

Concatenated unique item identifier means--

(1) For items that are serialized within the enterprise identifier, the linking together of the unique identifier data elements in order of the issuing agency code, enterprise identifier, and unique serial number within the enterprise identifier; or

(2) For items that are serialized within the original part, lot, or batch number, the linking together of the unique identifier data elements in order of the issuing agency code; enterprise identifier; original part, lot, or batch number; and serial number within the original part, lot, or batch number.

Data qualifier means a specified character (or string of characters) that immediately precedes a data field that defines the general category or intended use of the data that follows.

DoD recognized unique identification equivalent means a unique identification method that is in commercial use and has been recognized by DoD. All DoD recognized unique identification equivalents are listed at <http://www.acq.osd.mil/dpap/UID/equivalents.html>.

DoD unique item identification means a system of marking items delivered to DoD with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items. For items that are serialized within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier and a unique serial number. For items that are serialized within the part, lot, or batch number within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier; the original part, lot, or batch number; and the serial number.

Enterprise means the entity (e.g., a manufacturer or vendor) responsible for assigning unique item identifiers to items.

Enterprise identifier means a code that is uniquely assigned to an enterprise by an issuing agency.

Government's unit acquisition cost means--

(1) For fixed-price type line, subline, or exhibit line items, the unit price identified in the contract at the time of delivery;

(2) For cost-type or undefinitized line, subline, or exhibit line items, the Contractor's estimated fully burdened unit cost to the Government at the time of delivery; and

(3) For items produced under a time-and-materials contract, the Contractor's estimated fully burdened unit cost to the Government at the time of delivery.

Issuing agency means an organization responsible for assigning a non-repeatable identifier to an enterprise (i.e., Dun & Bradstreet's Data Universal Numbering System (DUNS) Number, Uniform Code Council (UCC)/EAN International (EAN) Company Prefix, or Defense Logistics Information System (DLIS) Commercial and Government Entity (CAGE) Code).

Issuing agency code means a code that designates the registration (or controlling) authority for the enterprise identifier.

Item means a single hardware article or a single unit formed by a grouping of subassemblies, components, or constituent parts.

Lot or batch number means an identifying number assigned by the enterprise to a designated group of items, usually referred to as either a lot or a batch, all of which were manufactured under identical conditions.

Machine-readable means an automatic identification technology media, such as bar codes, contact memory buttons, radio frequency identification, or optical memory cards.

Original part number means a combination of numbers or letters assigned by the enterprise at item creation to a class of items with the same form, fit, function, and interface.

Parent item means the item assembly, intermediate component, or subassembly that has an embedded item with a unique item identifier or DoD recognized unique identification equivalent.

Serial number within the enterprise identifier means a combination of numbers, letters, or symbols assigned by the enterprise to an item that provides for the differentiation of that item from any other like and unlike item and is never used again within the enterprise.

Serial number within the part, lot, or batch number means a combination of numbers or letters assigned by the enterprise to an item that provides for the differentiation of that item from any other like item within a part, lot, or batch number assignment.

Serialization within the enterprise identifier means each item produced is assigned a serial number that is unique among all the tangible items produced by the enterprise and is never used again. The enterprise is responsible for ensuring unique serialization within the enterprise identifier.

Serialization within the part, lot, or batch number means each item of a particular part, lot, or batch number is assigned a unique serial number within that part, lot, or batch number assignment. The enterprise is responsible for ensuring unique serialization within the part, lot, or batch number within the enterprise identifier.

Unique item identifier means a set of data elements marked on items that is globally unique and unambiguous.

Unique item identifier type means a designator to indicate which method of uniquely identifying a part has been used. The current list of accepted unique item identifier types is maintained at [http://www.acq.osd.mil/dpap/UID/uid\\_\\_types.html](http://www.acq.osd.mil/dpap/UID/uid__types.html).

(b) The Contractor shall deliver all items under a contract line, subline, or exhibit line item.



(c) DoD unique item identification or DoD recognized unique identification equivalents.

(1) The Contractor shall provide DoD unique item identification, or a DoD recognized unique identification equivalent, for--

(i) All delivered items for which the Government's unit acquisition cost is \$5,000 or more; and

(ii) The following items for which the Government's unit acquisition cost is less than \$5,000:

Contract line, subline, or exhibit line

Item No.

Item description

Can be determined at a later date per task order.

(iii) Subassemblies, components, and parts embedded within delivered items as specified in Attachment Number -----.

(2) The concatenated unique item identifier and the component data elements of the DoD unique item identification or DoD recognized unique identification equivalent shall not change over the life of the item.

(3) Data syntax and semantics of DoD unique item identification and DoD recognized unique identification equivalents. The Contractor shall ensure that--

(i) The encoded data elements (except issuing agency code) of the unique item identifier are marked on the item using one of the following three types of data qualifiers, as determined by the Contractor:

(A) Data Identifiers (DIs) (Format 06) in accordance with ISO/IEC International Standard 15418, Information Technology `` EAN/UCC Application Identifiers and ANSI MH 10 Data Identifiers and ANSI MH 10 Data Identifiers and Maintenance.

(B) Application Identifiers (AIs) (Format 05), in accordance with ISO/IEC International Standard 15418, Information Technology `` EAN/UCC Application Identifiers and ANSI MH 10 Data Identifiers and ANSI MH 10 Data Identifiers and Maintenance.

(C) Text Element Identifiers (TEIs), in accordance with the DoD collaborative solution ``DD" format for use until the solution is approved by ISO/IEC JTC1 SC 31. The ``DD" format is described in Appendix D of the DoD Guide to Uniquely Identifying Items, available at <http://www.acq.osd.mil/dpap/UID/guides.htm>; and

(ii) The encoded data elements of the unique item identifier conform to ISO/IEC International Standard 15434, Information Technology--Syntax for High Capacity Automatic Data Capture Media.

(4) DoD unique item identification and DoD recognized unique identification equivalents.

(i) The Contractor shall--

(A) Determine whether to serialize within the enterprise identifier or serialize within the part, lot, or batch number; and

(B) Place the data elements of the unique item identifier (enterprise identifier; serial number; and for serialization within the part, lot, or batch number only; original part, lot, or batch number) on items requiring marking by paragraph (c)(1) of this clause, based on the criteria provided in the version of MIL-STD-130, Identification Marking of U.S. Military Property, cited in the contract Schedule.

(ii) The issuing agency code--

(a) Shall not be placed on the item; and

(B) Shall be derived from the data qualifier for the enterprise identifier.

(d) For each item that requires unique item identification under paragraph (c)(1)(i) or (ii) of this clause, in addition to the information provided as part of the Material Inspection and Receiving Report specified elsewhere in this contract, the Contractor shall report at the time of delivery, either as part of, or associated with, the Material Inspection and Receiving Report, the following information:

(1) Concatenated unique item identifier; or DoD recognized unique identification equivalent.

(2) Unique item identifier type.

(3) Issuing agency code (if concatenated unique item identifier is used).

(4) Enterprise identifier (if concatenated unique item identifier is used).

(5) Original part number.

(6) Lot or batch number.

(7) Current part number (if not the same as the original part number).

(8) Current part number effective date.

(9) Serial number.

(10) Government's unit acquisition cost.

(e) For embedded DoD serially managed subassemblies, components, and parts that require unique item identification under paragraph (c)(1)(iii) of this clause, the Contractor shall report at the time of delivery, either as part of, or associated with the Material Inspection and Receiving Report specified elsewhere in this contract, the following information:

(1) Concatenated unique item identifier or DoD recognized unique identification equivalent of the parent item delivered under a contract line, subline, or exhibit line item that contains the embedded subassembly, component, or part.

(2) Concatenated unique item identifier or DoD recognized unique identification equivalent of the embedded subassembly, component, or part.

(3) Unique item identifier type.\*\*

(4) Issuing agency code (if concatenated unique item identifier is used).\*\*

(5) Enterprise identifier (if concatenated unique item identifier is used).\*\*

(6) Original part number.\*\*

(7) Lot or batch number.\*\*

(8) Current part number (if not the same as the original part number).\*\*

(9) Current part number effective date.\*\*

(10) Serial number.\*\*

(11) Unit of measure.

(12) Description.

\*\* Once per item.

(f) The Contractor shall submit the information required by paragraphs (d) and (e) of this clause in accordance with the data submission procedures at <http://www.acq.osd.mil/dpap/UID/DataSubmission.htm>.

(g) Subcontracts. If paragraph (c)(1) of this clause applies, the Contractor shall include this clause, including this paragraph (g), in all subcontracts issued under this contract.

(End of clause)

(End of Section D)

## **SECTION E**

### **INSPECTION AND ACCEPTANCE**

E.1	52.246-2	Inspection of Supplies – Fixed-Price
E.2	52.246-16	Responsibility for Supplies

## SECTION E

### INSPECTION AND ACCEPTANCE

#### **E.1     52.246-2 -- Inspection of Supplies -- Fixed-Price.**

##### 52.246-2    INSPECTION OF SUPPLIES--FIXED-PRICE (AUG 1996)

(a) Definition. "Supplies," as used in this clause, includes but is not limited to raw materials, components, intermediate assemblies, end products, and lots of supplies.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering supplies under this contract and shall tender to the Government for acceptance only supplies that have been inspected in accordance with the inspection system and have been found by the Contractor to be in conformity with contract requirements. As part of the system, the Contractor shall prepare records evidencing all inspections made under the system and the outcome. These records shall be kept complete and made available to the Government during contract performance and for as long afterwards as the contract requires. The Government may perform reviews and evaluations as reasonably necessary to ascertain compliance with this paragraph. These reviews and evaluations shall be conducted in a manner that will not unduly delay the contract work. The right of review, whether exercised or not, does not relieve the Contractor of the obligations under the contract.

(c) The Government has the right to inspect and test all supplies called for by the contract, to the extent practicable, at all places and times, including the period of manufacture, and in any event before acceptance. The Government shall perform inspections and tests in a manner that will not unduly delay the work. The Government assumes no contractual obligation to perform any inspection and test for the benefit of the Contractor unless specifically set forth elsewhere in this contract.

(d) If the Government performs inspection or test 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. Except as otherwise provided in the contract, the Government shall bear the expense of Government inspections or tests made at other than the Contractor's or subcontractor's premises; provided, that in case of rejection, the Government shall not be liable for any reduction in the value of inspection or test samples.

(e)(1) When supplies are not ready at the time specified by the Contractor for inspection or test, the Contracting Officer may charge to the Contractor the additional cost of inspection or test.

(2) The Contracting Officer may also charge the Contractor for any additional cost of inspection or test when prior rejection makes reinspection or retest necessary.

(f) The Government has the right either to reject or to require correction of nonconforming supplies. Supplies are nonconforming when they are defective in material or workmanship or are otherwise not in conformity with contract requirements. The Government may reject nonconforming supplies with or without disposition instructions.

(g) The Contractor shall remove supplies rejected or required to be corrected. However, the Contracting Officer may require or permit correction in place, promptly after notice, by and at the expense of the Contractor. The Contractor shall not tender for acceptance corrected or rejected supplies without disclosing the former rejection or requirement for correction, and, when required, shall disclose the corrective action taken.

(h) If the Contractor fails to promptly remove, replace, or correct rejected supplies that are required to be removed or to be replaced or corrected, the Government may either (1) by contract or otherwise, remove, replace, or correct the supplies and charge the cost to the Contractor or (2) terminate the contract for default. Unless the Contractor corrects or replaces the supplies within the delivery schedule, the Contracting Officer may require their delivery and make an equitable price reduction. Failure to agree to a price reduction shall be a dispute.

(i)(1) If this contract provides for the performance of Government quality assurance at source, and if requested by the Government, the Contractor shall furnish advance notification of the time (i) when Contractor inspection or tests will be performed in accordance with the terms and conditions of the contract and (ii) when the supplies will be ready for Government inspection.

(2) The Government's request shall specify the period and method of the advance notification and the Government representative to whom it shall be furnished. Requests shall not require more than 2 workdays of advance notification if the Government representative is in residence in the Contractor's plant, nor more than 7 workdays in other instances.

(j) The Government shall accept or reject supplies as promptly as practicable after delivery, unless otherwise provided in the contract. Government failure to inspect and accept or reject the supplies shall not relieve the Contractor from responsibility, nor impose liability on the Government, for nonconforming supplies.

(k) Inspections and tests by the Government do not relieve the Contractor of responsibility for defects or other failures to meet contract requirements discovered before acceptance. Acceptance shall be conclusive, except for latent defects, fraud, gross mistakes amounting to fraud, or as otherwise provided in the contract.

(l) If acceptance is not conclusive for any of the reasons in paragraph (k) hereof, the Government, in addition to any other rights and remedies provided by law, or under other provisions of this contract, shall have the right to require the Contractor (1) at no increase in contract price, to correct or replace the defective or nonconforming supplies at the original point of delivery or at the Contractor's plant at the Contracting Officer's election, and in accordance with a reasonable delivery schedule as may be agreed upon between the Contractor and the Contracting Officer; provided, that the Contracting Officer may require a reduction in contract price if the Contractor fails to meet such delivery schedule, or (2) within a reasonable time after receipt by the Contractor of notice of defects or nonconformance, to repay such portion of the contract as is equitable under the circumstances if the Contracting Officer elects not to require correction or replacement. When supplies are returned to the Contractor, the Contractor shall bear the transportation cost from the original point of delivery to the Contractor's plant and return to the original point when that point is not the Contractor's plant. If the Contractor fails to perform or act as required in (1) or (2) above and does not cure such failure within a period of 10 days (or such longer period as the Contracting Officer may authorize in writing) after receipt of notice from the Contracting Officer specifying such failure, the Government shall have the right by contract or otherwise to replace or correct such supplies and charge to the Contractor the cost occasioned the Government thereby.

(End of clause)

## **E.2 52.246-16 -- Responsibility for Supplies.**

(a) Title to supplies furnished under this contract shall pass to the Government upon formal acceptance, regardless of when or where the Government takes physical possession, unless the contract specifically provides for earlier passage of title.

(b) Unless the contract specifically provides otherwise, risk of loss of or damage to supplies 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) Acceptance by the Government or delivery of the supplies to the Government at the destination specified in the contract, whichever is later, if transportation is f.o.b. destination.

(c) Paragraph (b) of this section shall not apply to supplies that so fail to conform to contract requirements as to give a right of rejection. The risk of loss of or damage to such nonconforming supplies remains with the Contractor until cure or acceptance. After cure or acceptance, paragraph (b) of this section shall apply.

(d) Under paragraph (b) of this section, the Contractor shall not be liable for loss of or damage to supplies caused by the negligence of officers, agents, or employees of the Government acting within the scope of their employment.

(End of Clause)

(End of Section E)

## **Section F**

### **Deliveries or Performance**

- F.1 Delivery Schedule
- F.2 52.211-17 Delivery of Excess Quantities (SEP 1989)
- F.3 52.242-15 Stop-Work Order
- F.4 52.242-17 Government Delay of Work
- F.5 52.247-34 F.O.B. Destination
- F.6 Delivery Location, Place of Performance, and Period of Performance



## Section F Deliveries or Performance

### F.1 Delivery Schedule

Contract Line Items	Due # of Calendar days after all submittals approved
0001 & 1001, 0002 & 1002, 0003 & 1003, 0004 & 1004, 0005 & 1005	14
0006 & 1006, 0007 & 1007	14
0008 & 1008, 0009 & 1009	30
0010 & 1010, 0011 & 1011, 0012 & 1012, 0013 & 1013	Per Task Order
0014 & 1014, 0015 & 1015, 0016 & 1016, 0017 & 1017	Per Task Order
0018AA & 1018AA, 0019AA & 1019AA, 0019BA & 1019BA, 0020AA & 1020AA, 0021AA & 1021AA, 0021BA & 1021BA, 0022AA & 1022AA, 0022BA & 1022BA, 0022CA & 1022CA, 0023AA & 1023AA, 0024AA & 1024AA, 0025AA & 1025AA, 0026AA & 1026AA, 0027AA & 1027AA, 0028AA & 1028AA, 0029AA & 1029AA, 0029BA & 1029BA, 0030AA & 1030AA, 0031AA & 1031AA, 0032AA & 1032AA, 0033AA & 1033AA, 0033BA & 1033BA, 0033CA & 1033CA, 0034AA & 1034AA, 0034BA & 1034BA, 0035AA & 1035AA, 0035BA & 1035BA, 0036AA & 1036AA, 0036BA & 1036BA, 0037AA & 1037AA, 0037BA & 1037BA, 0038AA & 1038AA	45
0018AB & 1018AB, 0019AB & 1019AB, 0019BB & 1019BB, 0020AB & 1020AB, 0021AB & 1021AB, 0021BB & 1021BB, 0022AB & 1022AB, 0022BB & 1022BB, 0022CB & 1022CB, 0023AB & 1023AB, 0024AB & 1024AB, 0025AB & 1025AB, 0026AB & 1026AB, 0027AB & 1027AB, 0028AB & 1028AB, 0029AB & 1029AB, 0029BB & 1029BB, 0030AB & 1030AB, 0031AB & 1031AB, 0032AB & 1032AB, 0033AB & 1033AB, 0033BB & 1033BB, 0033CB & 1033CB, 0034AB & 1034AB, 0034BB & 1034BB, 0035AB & 1035AB, 0035BB & 1035BB, 0036AB & 1036AB, 0036BB & 1036BB, 0037AB & 1037AB, 0037BB & 1037BB, 0038AB & 1038AB	14
0039 & 1039	Per Task Order

### F.2 52.211-17 Delivery of Excess Quantities (SEP 1989)

The Contractor is responsible for the delivery of each item quantity within allowable variations, if any. If the Contractor delivers and the Government receives quantities of any item in excess of the quantity called for (after considering any allowable variation in quantity), such excess quantities will be treated as being delivered for the convenience of the Contractor. The Government may retain such excess quantities up to \$250 in value without compensating the Contractor therefore, and the Contractor waives all right, title, or interests therein. Quantities in excess of \$250 will, at the option of the Government, either be returned at the Contractor's expense or retained and paid for by the Government at the contract unit price.

### F.3 52.242-15 -- Stop-Work Order.

(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)

#### **F.4 52.242-17 -- Government Delay of Work.**

(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)

#### **F.5 52.247-34 -- F.o.b. -- Destination.**

(a) The term "f.o.b. destination," as used in this clause, means--

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall--

(1)(i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

(5) Furnish a delivery schedule and designate the mode of delivering carrier; and

(6) Pay and bear all charges to the specified point of delivery.

(End of clause)

## **F.6 Delivery Location, Place of Performance, and Period of Performance**

Delivery location may be within any site within the Federal Columbia River Power System (FCRPS), and the Columbia, Snake and Willamette River Systems that covers the following district offices: Seattle District, Portland District, and Walla Walla District. Point of delivery or place of performance will be determined per task order.

(End of Section F)

## **SECTION G**

### **CONTRACT ADMINISTRATION DATA**

- G.1 Invoices
- G.2 Contract Administration Data
- G.3 Contracting Officer's Representative
- G.4 Partnering

## SECTION G

### CONTRACT ADMINISTRATION DATA

#### G.1 Invoices

G.1.1 Invoices to be submitted as prescribed per individual task order.

G.1.2 INVOICE SUBMITTAL:

Original:  
USACE Finance Center  
5720 Integrity Drive  
Millington, TN 38054-5005

One copy to:  
Portland District, Corps of Engineers  
Attn: CENWP-CT-S  
P.O. Box 2946  
Portland, OR 97208-2946

One copy to the designated ordering office or as directed per task order.

G.1.3 Remittance Address The payment office for the contractor shall be included in the proposal, if it is different from that shown for the offeror.

G.1.4 Final Invoice

The language below shall be included on the final invoice for each task order.

"In consideration of the payment agreed to herein as complete equitable adjustment for the work described hereinabove, the contractor hereby releases the Government from any and all liabilities under this task order for further equitable adjustments attributable to such facts or circumstances giving rise to the aforesaid work.

Exceptions: \_\_\_\_\_  
(Contractor fill in exception above. If "None" please state "None or N/A".)

Also, in addition to the invoice, which is sent to the address indicated on the standard form of the task order, the contractor shall provide a copy of the invoice to the Contracting Office. Upon receipt of the final invoice, which shall contain the statement above, the Contracting Officer may unilaterally deobligate excess funds against the task order.

## **G.2 Contract Administration Data**

G.2.1 The contract will be administered by:  
Portland District, Corps of Engineers  
Attn: CENWP-CT-S  
P.O. Box 2946  
Portland, OR 97208-2946

G.2.2 Each task order will be administered by the ordering office indicated in the task order.

## **G.3 Contracting Officer's Representative**

Will be appointed in writing by the issuing office of the task order.

## **G.4 Partnering**

The Government intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. Among the objectives are effective and efficient contract performance and are intended to achieve completion within budget, on schedule, and in accordance with the plans and specifications; and to develop a single cooperative management team focused on the success of the project to mutual benefit of all stakeholders. This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties, and will be shared equally with no change to the contract price. An integral aspect of partnering is the resolution of disputes in a timely, professional, and non-adversarial manner through the use of issue clarification and problem solving. Alternate Dispute Resolution (ADR) methodologies will be encouraged in place of the more formal dispute resolution procedures. ADR will assist in promoting and maintaining an amicable working relationship to preserve the partnership. ADR is a voluntary, non-binding procedure available for use by the parties to this contract to resolve any dispute that may arise during performance

(End of Section G)

## **SECTION H**

### **SPECIAL CONTRACT REQUIREMENTS**

- H.1 TASK ORDER ISSUANCE
- H.2 52.202-4005 PER DIEM RATE
- H.3 BONNEVILLE POWER ADMINISTRATION INVOLVEMENT

## **SECTION H**

### **SPECIAL CONTRACT REQUIREMENTS**

#### **H.1 Task Order Issuance**

H.2.1 Each task order issued under this contract will specify products to be delivered.

H.2.2 Firm-Fixed Price All task orders issued under this contract shall be responded to. The task orders issued will be firm-fixed price. The contracting officer will issue a task order setting forth the agreed to completion date and price for the work.

H.2.3 Commencement of Work For any task order issued, the Contractor shall commence performance of the work specifically described in each task order within the time specified and shall diligently prosecute the work to completion within the agreed to period of time. The Contractor shall not commence any work until the task order for the work has been issued.

H.2.4 Completion Time the Contractor shall complete all work in accordance with the schedule specified in the individual task order.

H.2.5 Delay of Work Any circumstances arising during the course of the work that could result in a delay of the completion date shall be reported to the Contracting Officer's Representative (COR) immediately by telephone and confirmed in writing. A copy of the aforementioned shall be sent to the Contracting Officer.

#### **H.2 52.202-4005 Per Diem Rate**

Cost for per diem (lodging, meals and incidental expenses incurred by the Contractor during travel for performance of work under this contract) will be reimbursed only to the extent that the costs do not exceed the rates and amounts set for Government employees in the Joint Travel Regulations (JTR). For work under this contract, the per diem rate will be no more than the rate specified in the JTR for the location or locations to which Contractor personnel must travel in performance of this contract.

#### **H.3 Bonneville Power Administration Involvement**

By Agreement between the Department of the Army and the Bonneville Power Administration (BPA) some projects completed under this contract may be funded in whole or part by BPA. For such task orders the contractor is hereby advised that, per the agreement between the Army and BPA, that the BPA will be notified of any and all disputes and that the BPA will be provided with an opportunity to participate in the dispute litigation and settlement negotiations.

(End of Section H)



## SECTION I

### CONTRACT CLAUSES

#### CLAUSES INCORPORATED BY REFERENCE

#### CLAUSES INCORPORATED BY FULL TEXT

I. 1	52.0000-4001	OWNERSHIP AND RESPONSIBILITY
I. 2	52.202-4005	PER DIEM RATE
I. 3	52.203-14	DISPLAY OF HOTLINE POSTER(S) (DEC 2007)
I. 4	52.216-18	ORDERING. (OCT 1995)
I. 5	52.216-19	ORDER LIMITATIONS (OCT 1995)
I. 6	52.216-22	INDEFINITE QUANTITY. (OCT 1995)
I. 7		METHODS OF PAYMENTS
I. 8	52.217-9	OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)
I. 9	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)
I. 10	52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN (NOV 2007)--ALTERNATE II (OCT 2001).
I. 11	52.219-16	LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)
I. 12	52.222-21	PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
I. 13	52.243-1	CHANGES--FIXED-PRICE (AUG 1987)
I. 14	52.227-14	RIGHTS IN DATA--GENERAL (DEC 2007) - ALTERNATE III (DEC 2007).
I. 15	52.236-7	PERMITS AND RESPONSIBILITIES (NOV 1991)
I. 16	52.246-18	WARRANTY OF SUPPLIES OF A COMPLEX NATURE (MAY 2001)
I. 17	52.252-2	CLAUSES INCORPORATED BY REFERENCE (FEB 1998)
I. 18	52.252-6	AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)
I. 19	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)
I. 20	252.219-7003	SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 2007)
I. 21	252.225-7021	TRADE AGREEMENTS (MAR 2007)
I. 22	252.227-7013	RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS. (NOV 1995)
I. 23	252.227-7014	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION. (JUN 1995)
I. 24	252.227-7017	IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS. (JUN 1995)
I. 25	252.227-7022	GOVERNMENT RIGHTS (UNLIMITED) (MAR 1979)
I. 26	252.227-7033	RIGHTS IN SHOP DRAWINGS (APR 1966)
I. 27	252.236-7001	CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)
I. 28	252.247-7023	TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)
I. 29	252.247-7024	NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

# SECTION I

## CONTRACT CLAUSES

### CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2007
52.203-13	Contractor Code of Business Ethics and Conduct	DEC 2007
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-7	Central Contractor Registration	JUL 2006
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Cost or Pricing Data--Modifications	OCT 1997
52.215-20 Alt IV	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data (Oct 1997) - Alternate IV	OCT 1997
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Data--Modifications	OCT 1997
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	JUL 2005
52.222-19	Child Labor -- Cooperation with Authorities and Remedies	AUG 2007
52.222-20	Walsh-Healey Public Contracts Act	DEC 1996
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
52.223-6	Drug-Free Workplace	MAY 2001
52.223-11	Ozone-Depleting Substances	MAY 2001
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2006
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.229-3	Federal, State And Local Taxes	APR 2003
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-11	Extras	APR 1984
52.232-16	Progress Payments	APR 2003
52.232-17	Interest	JUN 1996

52.232-23	Assignment Of Claims	JAN 1986
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.236-5	Material and Workmanship	APR 1984
52.242-13	Bankruptcy	JUL 1995
52.249-2	Termination For Convenience Of The Government (Fixed- Price)	MAY 2004
52.249-8	Default (Fixed-Price Supply & Service)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense- Contract-Related Felonies	DEC 2004
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.215-7000	Pricing Adjustments	DEC 1991
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7012	Preference For Certain Domestic Commodities	JAN 2007
252.225-7013	Duty-Free Entry	OCT 2006
252.225-7014	Preference For Domestic Specialty Metals	JUN 2005
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	MAR 2006
252.225-7031	Secondary Arab Boycott Of Israel	JUN 2005
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004
252.232-7003	Electronic Submission of Payment Requests	MAR 2007
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998

## **CLAUSES INCORPORATED BY FULL TEXT**

### **I. 1 52.0000-4001 OWNERSHIP AND RESPONSIBILITY**

The Contractor shall assume responsibility of products used during the performance of this work.

The Contractor shall not limit his liabilities related to the materials used, and shall indemnify, defend, and hold harmless from and against any liability, expense, or loss resulting from the failure of the Contractor, its agents, or sub-contractors to comply fully with Government directive, which directly or indirectly regulates or effects the collection, handling, storage or disposal of herbicide or pesticide waste products to be disposed of by the Contractor, under the terms of this contract and from and against all claims, suits, and liabilities, directly or indirectly based upon damage to, or destruction of any property, including property of the Contractor, or bodily injury, including death to any person arising out of or due to negligent or willful act of the contractor, its agents or sub-contractors in the collection, handling, storage, transportation, or disposal of the materials to be disposed of by the Contractor hereunder.

### **I. 2 52.202-4005 PER DIEM RATE**

Cost for per diem (lodging, meals and incidental expenses incurred by the Contractor during travel for performance of work under this contract) will be reimbursed only to the extent that the costs do not exceed the rates and amounts set for Government employees in the Joint Travel Regulations (JTR). For work under this contract, the per diem rate will be no more than the rate specified in the JTR for the location or locations to which Contractor personnel must travel in performance of this contract.

### **I. 3 52.203-14 DISPLAY OF HOTLINE POSTER(S) (DEC 2007)**

(a) Definition.

United States, as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) Display of fraud hotline poster(s). Except as provided in paragraph (c)--

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites--

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Poster(s) Obtain from

<http://www.dodig.osd.mil/HOTLINE/hotline7.htm>

(Contracting Officer shall insert—

(i) Appropriate agency name(s) and/or title of applicable Department of Homeland Security fraud hotline poster); and

(ii) The website(s) or other contact information for obtaining the poster(s).)

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed \$5,000,000, except when the subcontract--

(1) Is for the acquisition of a commercial item; or

(2) Is performed entirely outside the United States.

(End of clause)

#### **I. 4 52.216-18 ORDERING. (OCT 1995)**

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from date of award through the end of the contract period.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

(End of clause)

#### **I. 5 52.216-19 ORDER LIMITATIONS (OCT 1995)**

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than \$5,000.00 the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor:

(1) Any order for a single item in excess of \$4,000,000.00;

(2) Any order for a combination of items in excess of \$4,000,000.00; or

(3) A series of orders from the same ordering office within five (5) days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within three (3) days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

## **I. 6     52.216-22     INDEFINITE QUANTITY. (OCT 1995)**

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after the last completion date of any task order issued against this contract by the Contracting Officer.

(End of clause)

## **I. 7     METHODS OF PAYMENTS**

Subject to Contract Clause, 52.232-16, "PROGRESS PAYMENTS", and all the provisions set forth below, payments to the Contractor will be made monthly or at such other times as may be mutually agreed to on estimates of work performed under this contract and not included in any prior estimate. In preparing estimates the machinery, material, and articles which have been purchased, paid for, and received by the Contractor and which are to be incorporated into the completed equipment will be taken into consideration. Estimates of work will be by items as numbered and described in THE BID SCHEDULE of the contract. Estimates for all items will be based on a well balanced schedule prepared by the Contractor and approved by the Contracting Officer, apportioning the contract prices of the respective items to the principal features entering into or forming parts of said items. The amount apportioned to each of said principal features shall be separately stated for labor and materials, and the total amount shown by the Schedule for any item shall equal the contract price for said item. In making such progress payments there will be retained 25 percent of the estimated amount in the case of a large business, 10 percent if awarded to small business, and 5 percent if awarded to small disadvantaged business concerns except no retention will be made on payments for items for which the pay units are man-days. Upon satisfactory delivery of the equipment to be

furnished hereunder f.o.b. delivery point one-half of the retained percentage will be paid. The remainder of the retained percentage applicable to the equipment will be withheld until after the equipment has been accepted in accordance with the provisions of SPECIFICATIONS. Payment of the retained percentage will not relieve the Contractor of the responsibility for the satisfactory operation of the equipment and for meeting all the performance guarantees provided for herein. Upon the making of any progress payment on estimates of work performed as aforementioned, title to all equipment, parts, articles, and materials and work in process included in such estimates of work performed shall forthwith vest in the Government, but nothing herein shall relieve the Contractor of the duties and responsibilities set forth in the contract.

(a) The responsibilities of the Corps are limited by this clause notwithstanding any contrary provision of the "Payments to Contractor" clause or any other clause of this contract.

(b) Pursuant to the authority of 33 U.S.C. § 621 and 16 U.S.C. § 839d-1 this contract is incrementally funded on a fiscal year basis by the Bonneville Power Administration (BPA). Funds are not available at the inception of this contract to cover the entire contract price. The sum of \$ \_\_\_\_\_ has been reserved under this contract by the Corps and is available under for payment to the contractor during the current fiscal year. In accordance with the Memorandum of Agreement (MOA) between BPA and the Department of the Army (Contract No. DE MS79-94BP94655), the Sub-agreement \_\_\_\_\_ between the Corps and BPA sets the total funding requirements for project construction and the annual funding requirements. The Corps has agreed to perform the work specified within the estimated annual funding requirements and shall coordinate with BPA in updating funding requirements. The liability of the Corps for payments beyond the funds currently reserved under this contract is contingent on the availability of additional funds from BPA under the MOA and Sub-agreement.

(c) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not be considered a breach of this contract, and shall not entitle the contractor to a price adjustment under the terms of this contract.

(d) Contingent upon additional funds being provided by BPA to the Corps, the contracting officer may at any time reserve additional funds for payments under this contract by issuing an administrative change to the contract.

(e) If earnings will be such that funds reserved for this contract will be exhausted before the end of the fiscal year, the contractor shall give written notice to the contracting officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under this contract during that fiscal year. This notice shall be given not less than 45 or more than 60 days prior to the estimated date of exhaustion.

(f) Upon receipt of the contractor's notice under subparagraph (d), the contracting officer shall promptly provide written notice to the contractor that the Corps is-

- (1) Increasing the Corps' reservation of funds under this contract in a specified amount; or
- (2) Reducing the scope of work or terminating the contract; or
- (3) Unable to reserve additional funds until the following fiscal year.

(g) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the contractor to any price adjustment under a "Suspension of Work" or similar clause or in any other manner under this contract.

(h) An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of the exhaustion of funds.

(i) If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Corps has failed to reserve sufficient additional funds to cover payments otherwise due, the contractor, by written notice delivered to the contracting officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be at no cost to the Corps, except that, to the extent that additional funds to make payment therefore are allocated to this contract, it may be treated as a termination for the convenience of the Government.

(j) If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the contractor because of work performed and to be performed under this contract during the fiscal year, the Corps reserves the right, by modification to the contract, to reduce said reservation by the amount of such excess.

(k) The term "Reservation" means funds that have been set aside and made available for payment under this contract by the Corps.

End of Clause

## **I. 8    52.217-9    OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)**

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days prior to the end of the contract period; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 60 months.

(End of clause)

## **I. 9    52.219-8    UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)**

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.



Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

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 service-disabled 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 small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, 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); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

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 the stock of which is owned by one or more women; and

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

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small

business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

## **I. 10 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (NOV 2007)-- ALTERNATE II (OCT 2001).**

(a) This clause does not apply to small business concerns.

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

Alaska Native Corporation (ANC) means any Regional Corporation, Village Corporation, Urban Corporation, or Group Corporation organized under the laws of the State of Alaska in accordance with the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1601, et seq.) and which is considered a minority and economically disadvantaged concern under the criteria at 43 U.S.C. 1626(e)(1). This definition also includes ANC direct and indirect subsidiary corporations, joint ventures, and partnerships that meet the requirements of 43 U.S.C. 1626(e)(2).

“Commercial item” means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

“Commercial plan” means a subcontracting plan (including goals) that covers the offeror’s fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (e.g., division, plant, or product line).

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 (43 U.S.C.A. 1601 et seq.), that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs in accordance with 25 U.S.C. 1452(c). This definition also includes Indian-owned economic enterprises that meet the requirements of 25 U.S.C. 1452(e).

“Individual contract plan” means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror’s planned subcontracting in support of the specific contract except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

“Master plan” means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

“Subcontract” means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) Proposals submitted in response to this solicitation shall include a subcontracting plan that separately addresses subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The

subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate a subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) ) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs. In accordance with 43 U.S.C. 1626:

(i) Subcontracts awarded to an ANC or Indian tribe shall be counted towards the subcontracting goals for small business and small disadvantaged business (SDB) concerns, regardless of the size or Small Business Administration certification status of the ANC or Indian tribe.

(ii) Where one or more subcontractors are in the subcontract tier between the prime contractor and the ANC or Indian tribe, the ANC or Indian tribe shall designate the appropriate contractor(s) to count the subcontract towards its small business and small disadvantaged business subcontracting goals.

(A) In most cases, the appropriate Contractor is the Contractor that awarded the subcontract to the ANC or Indian tribe.

(B) If the ANC or Indian tribe designates more than one Contractor to count the subcontract toward its goals, the ANC or Indian tribe shall designate only a portion of the total subcontract award to each Contractor. The sum of the amounts designated to various Contractors cannot exceed the total value of the subcontract.

(C) The ANC or Indian tribe shall give a copy of the written designation to the Contracting Officer, the prime Contractor, and the subcontractors in between the prime Contractor and the ANC or Indian tribe within 30 days of the date of the subcontract award.

(D) If the Contracting Officer does not receive a copy of the ANC's or the Indian tribe's written designation within 30 days of the subcontract award, the Contractor that awarded the subcontract to the ANC or Indian tribe will be considered the designated Contractor.

(2) A statement of --

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns (including ANC and Indian tribes);

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;

(v) Total dollars planned to be subcontracted to HUBZone small business concerns;

(vi) Total dollars planned to be subcontracted to small disadvantaged business concerns (including ANCs and Indian tribes); and

(vii) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to --

- (i) Small business concerns,
  - (ii) Veteran-owned small business concerns;
  - (iii) Service-disabled veteran-owned small business concerns;
  - (iv) HUBZone small business concerns;
  - (v) Small disadvantaged business concerns, and
  - (vi) Women-owned small business concerns.
- (4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.
- (5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.
- (6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with --
- (i) Small business concerns (including ANC and Indian tribes);
  - (ii) Veteran-owned small business concerns;
  - (iii) Service-disabled veteran-owned small business concerns;
  - (iv) HUBZone small business concerns;
  - (v) Small disadvantaged business concerns (including ANC and Indian tribes); and
  - (vi) Women-owned small business concerns.
- (7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.
- (8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.
- (9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$550,000 (\$1,000,000 for construction of any public facility) to adopt a plan similar to the plan that complies with the requirements of this clause.
- (10) Assurances that the offeror will --

(i) Cooperate in any studies or surveys as may be required;

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with the paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.

(iv) Ensure that its subcontractors agree to submit SF 294 and 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

(i) Source lists (e.g., PRO-Net), guides, and other data that identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating --

(A) Whether small business concerns were solicited and if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;

(D) Whether HUBZone small business concerns were solicited and, if not, why not;

(E) Whether small disadvantaged business concerns were solicited and if not, why not;

(F) Whether women-owned small business concerns were solicited and if not, why not; and

(G) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact --

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through --

(A) Workshops, seminars, training, etc., and

(B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the Central Contractor Registration (CCR) database or by contacting SBA.

(5) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owned small business, HUBZone small, small disadvantaged or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided --

(1) The master plan has been approved;

(2) The offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer; and

(3) Goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that

provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with --

(1) The clause of this contract entitled "Utilization Of Small Business Concerns;" or

(2) An approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) Standard Form 294, Subcontracting Report for Individual Contracts. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) Standard Form 295, Summary Subcontract Report. This report encompasses all the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

## **I. 11 52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)**

(a) Failure to make a good faith effort to comply with the subcontracting plan, as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

(b) Performance shall be measured by applying the percentage goals to the total actual subcontracting dollars or, if a commercial plan is involved, to the pro rata share of actual subcontracting dollars attributable to Government contracts covered by the commercial plan. If, at contract completion or, in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled "Small Business Subcontracting Plan," the Contractor shall pay the Government liquidated damages in an amount stated. The amount of probable damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made and to discuss the matter. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the

subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial plans, the Contracting Officer who approved the plan will perform the functions of the Contracting Officer under this clause on behalf of all agencies with contracts covered by the commercial plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may have.

(End of clause)

## **I. 12 52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)**

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

## **I. 13 52.243-1 CHANGES--FIXED-PRICE (AUG 1987)**

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.

(2) Method of shipment or packing.

(3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.



(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(End of clause)

## **I. 14 52.227-14 RIGHTS IN DATA--GENERAL (DEC 2007) - ALTERNATE III (DEC 2007).**

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

Computer database or database means a collection of recorded information in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

Computer software--(1) Means (i) Computer programs that comprise a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations; and

(ii) Recorded information comprising source code listings, design details, algorithms, processes, flow charts, formulas, and related material that would enable the computer program to be produced, created, or compiled.

(2) Does not include computer databases or computer software documentation.

Computer software documentation means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

Data means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information.

Form, fit, and function data means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, and data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements. For computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithms, processes, formulas, and flow charts of the software.

Limited rights means the rights of the Government in limited rights data as set forth in the Limited Rights Notice of paragraph (g)(3) if included in this clause.

Limited rights data means data, other than computer software, that embody trade secrets or are commercial or financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications.

Restricted computer software means computer software developed at private expense and that is a trade secret, is commercial or financial and confidential or privileged, or is copyrighted computer software, including minor modifications of the computer software.

Restricted rights, as used in this clause, means the rights of the Government in restricted computer software, as set forth in a Restricted Rights Notice of paragraph (g) if included in this clause, or as otherwise may be provided in a collateral agreement incorporated in and made part of this contract, including minor modifications of such computer software.

Technical data, means recorded information (regardless of the form or method of the recording) of a scientific or technical nature (including computer databases and computer software documentation). This term does not include computer software or financial, administrative, cost or pricing, or management data or other information incidental to contract administration. The term includes recorded information of a scientific or technical nature that is included in computer databases (See 41 U.S.C. 403(8)).

Unlimited rights means the rights of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so.

(b) Allocation of rights. (1) Except as provided in paragraph

(c) of this clause, the Government shall have unlimited rights in--

(i) Data first produced in the performance of this contract;

(ii) Form, fit, and function data delivered under this contract;

(iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this contract; and

(iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause.

(2) The Contractor shall have the right to--

(i) Assert copyright in data first produced in the performance of this contract to the extent provided in paragraph (c)(1) of this clause;

(ii) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) of this clause;

(iii) Substantiate the use of, add, or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this clause; and

(iv) Protect from unauthorized disclosure and use those data that are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause.

(c) Copyright--(1) Data first produced in the performance of this contract. (i) Unless provided otherwise in paragraph (d) of this clause, the Contractor may, without prior approval of the Contracting Officer, assert copyright in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings, or similar works. The prior, express written permission of the Contracting Officer is required to assert copyright in all other data first produced in the performance of this contract.

(ii) When authorized to assert copyright to the data, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402, and an acknowledgment of Government sponsorship (including contract number).

(iii) For data other than computer software, the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly by or on behalf of the Government. For computer software, the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly (but not to distribute copies to the public) by or on behalf of the Government.

(2) Data not first produced in the performance of this contract. The Contractor shall not, without the prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract unless the Contractor--

(i) Identifies the data; and

(ii) Grants to the Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (c)(1) of this clause or, if such data are restricted computer software, the Government shall acquire a copyright license as set forth in paragraph (g)(4) of this clause (if included in this contract) or as otherwise provided in a collateral agreement incorporated in or made part of this contract.

(3) Removal of copyright notices. The Government will not remove any authorized copyright notices placed on data pursuant to this paragraph (c), and will include such notices on all reproductions of the data.

(d) Release, publication, and use of data. The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except--

(1) As prohibited by Federal law or regulation (e.g., export control or national security laws or regulations);

(2) As expressly set forth in this contract; or

(3) If the Contractor receives or is given access to data necessary for the performance of this contract that contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless specifically authorized otherwise in writing by the Contracting Officer.

(e) Unauthorized marking of data. (1) Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked with the notices specified in paragraph (g)(3) or (g) (4) if included in this clause, and use of the notices is not authorized by this clause, or if the data bears any other restrictive or limiting markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, pursuant to 41 U.S.C. 253d, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer will make written inquiry to the Contractor affording the Contractor 60 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 60-day period (or a longer time approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in paragraph (e)(1)(i) of this clause, the Contracting Officer will consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor will be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer will furnish the Contractor a written determination, which determination will become the final agency decision regarding the

appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government will continue to abide by the markings under this paragraph (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government will thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in paragraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(3) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by paragraph (e) of the clause from bringing a claim, in accordance with the Disputes clause of this contract, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) Omitted or incorrect markings. (1) Data delivered to the Government without any restrictive markings shall be deemed to have been furnished with unlimited rights. The Government is not liable for the disclosure, use, or reproduction of such data.

(2) If the unmarked data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer in writing for good cause shown) after delivery of the data, permission to have authorized notices placed on the data at the Contractor's expense. The Contracting Officer may agree to do so if the Contractor--

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability for the disclosure, use, or reproduction of any data made prior to the addition of the notice or resulting from the omission of the notice.

(3) If data has been marked with an incorrect notice, the Contracting Officer may--

(i) Permit correction of the notice at the Contractor's expense if the Contractor identifies the data and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

(g) Protection of limited rights data and restricted computer software. (1) The Contractor may withhold from delivery qualifying limited rights data or restricted computer software that are not data identified in paragraphs (b)(1)(i), (ii), and (iii) of this clause. As a condition to this withholding, the Contractor shall--

(i) Identify the data being withheld; and

(ii) Furnish form, fit, and function data instead.

(2) Limited rights data that are formatted as a computer database for delivery to the Government shall be treated as limited rights data and not restricted computer software.

(3) [Reserved]

(4)(i) Notwithstanding paragraph (g)(1) of this clause, the contract may identify and specify the delivery of restricted computer software, or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be entitled to be withheld. If delivery of that computer software is required, the Contractor shall affix the following "Restricted Rights Notice" to the computer software and the Government will treat the computer software, subject to paragraphs (e) and (f) of this clause, in accordance with the notice:

#### RESTRICTED RIGHTS NOTICE (DEC 2007)

(a) This computer software is submitted with restricted rights under Government Contract No. ----- (and subcontract -----, if appropriate). It may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b) of this notice or as otherwise expressly stated in the contract.

(b) This computer software may be--

(1) Used or copied for use with the computer(s) for which it was acquired, including use at any Government installation to which the computer(s) may be transferred;

(2) Used or copied for use with a backup computer if any computer for which it was acquired is inoperative;

(3) Reproduced for safekeeping (archives) or backup purposes;

(4) Modified, adapted, or combined with other computer software, provided that the modified, adapted, or combined portions of the derivative software incorporating any of the delivered, restricted computer software shall be subject to the same restricted rights;

(5) Disclosed to and reproduced for use by support service Contractors or their subcontractors in accordance with paragraphs (b)(1) through (4) of this notice; and

(6) Used or copied for use with a replacement computer.

(c) Notwithstanding the foregoing, if this computer software is copyrighted computer software, it is licensed to the Government with the minimum rights set forth in paragraph (b) of this notice.

(d) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the contract.

(e) This notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

(ii) Where it is impractical to include the Restricted Rights Notice on restricted computer software, the following short-form notice may be used instead:

#### RESTRICTED RIGHTS NOTICE SHORT FORM (Jun 1987)

Use, reproduction, or disclosure is subject to restrictions set forth in Contract No. ----- (and subcontract, if appropriate) with ----- (name of Contractor and subcontractor).

(End of notice)

(iii) If restricted computer software is delivered with the copyright notice of 17 U.S.C. 401, it will be presumed to be licensed to the Government without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this clause.

(h) Subcontracting. The Contractor shall obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government those rights, the Contractor shall promptly notify the Contracting Officer of the refusal and shall not proceed with the subcontract award without authorization in writing from the Contracting Officer.

(i) Relationship to patents or other rights. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

(End of clause)

## **I. 15 52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)**

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

## **I. 16 52.246-18 WARRANTY OF SUPPLIES OF A COMPLEX NATURE (MAY 2001)**

(a) Definitions.

"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 rendered, as partial or complete performance of the contract.

"Correction," as used in this clause, means the elimination of a defect.

"Supplies," as used in this clause, means the end items furnished by the Contractor and related services required under this contract. The word does not include "data."

(b) Contractor's obligations. (1) The Contractor warrants that for **two calendar years after acceptance** all supplies furnished under this contract will be free from defects in material and workmanship and will conform with all requirements of this contract; provided, however, that with respect to Government-furnished property, the Contractor's warranty shall extend only to its proper installation, unless the Contractor performs some modification or other work on the property, in which case the Contractor's warranty shall extend to the modification or other work.

(2) Any supplies or parts thereof corrected or furnished in replacement shall be subject to the conditions of this clause to the same extent as supplies initially delivered. This warranty shall be equal in duration to that set forth in paragraph (b)(1) of this clause and shall run from the date of delivery of the corrected or replaced supplies.

(3) The Contractor shall not be obligated to correct or replace supplies if the facilities, tooling, drawings, or other equipment or supplies necessary to accomplish the correction or replacement have been made unavailable to the Contractor by action of the Government. In the event that correction or replacement has been directed, the Contractor shall promptly notify the Contracting Officer, in writing, of the nonavailability.

(4) The Contractor shall also prepare and furnish to the Government data and reports applicable to any correction required (including revision and updating of all affected data called for under this contract) at no increase in the contract price.

(5) When supplies are returned to the Contractor, the Contractor shall bear the transportation costs from the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) to the Contractor's plant and return.

(6) All implied warranties of merchantability and "fitness for a particular purpose" are excluded from any obligation contained in this contract.

(c) Remedies available to the Government. (1) In the event of a breach of the Contractor's warranty in paragraph (b)(1) of this clause, the Government may, at no increase in contract price--

(i) Require the Contractor, at the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) or at the Contractor's plant, to repair or replace, at the Contractor's election, defective or nonconforming supplies; or

(ii) Require the Contractor to furnish at the Contractor's plant the materials or parts and installation instructions required to successfully accomplish the correction.

(2) If the Contracting Officer does not require correction or replacement of defective or nonconforming supplies or the Contractor is not obligated to correct or replace under paragraph (b)(3) of this clause, the Government shall be entitled to an equitable reduction in the contract price.

(3) The Contracting Officer shall notify the Contractor in writing of any breach of the warranty in paragraph (b) of this clause within **45 calendar days after discovery of the defect**. The Contractor shall submit to the Contracting Officer a written recommendation within **30 calendar days** as to the corrective action required to remedy the breach. After the notice of breach, but not later than **30 calendar days** after receipt of the Contractor's recommendation for corrective action, the Contracting Officer may, in writing, direct correction or replacement as in paragraph (c)(1) of this clause, and the Contractor shall, notwithstanding any disagreement regarding the existence of a breach of warranty, comply with this direction. If it is later determined that the Contractor did not breach the warranty in paragraph (b)(1) of this clause, the contract price will be equitably adjusted.

(4) If supplies are corrected or replaced, the period for notification of a breach of the Contractor's warranty in paragraph (c)(3) of this clause shall be **45 calendar days after discovery of a defect** from the furnishing or return by the Contractor to the Government of the corrected or replaced supplies or parts thereof, or, if correction or replacement is effected by the Contractor at a Government or other activity, for **45 calendar days after discovery of a defect** thereafter.

(5) The rights and remedies of the Government provided in this clause are in addition to and do not limit any rights afforded to the Government by any other clause of the contract.

(End of clause)

## **I. 17 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):

(End of clause)

## **I. 18 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any DFARS (48 CFR 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

## **I. 19 252.201-7000 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)

## **I. 20 252.219-7003 SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 2007)**

This clause supplements the Federal Acquisition Regulation 52.219-9, Small Business Subcontracting Plan, clause of this contract.

(a) *Definitions. Historically black colleges and universities*, as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

*Minority institutions*, as used in this clause, means institutions meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).



(b) Except for company or division-wide commercial items subcontracting plans, the term *small disadvantaged business*, when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions, in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are not small business firms, for the small business firms specifically identified in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

(End of clause)

## **I. 21 252.225-7021 TRADE AGREEMENTS (MAR 2007)**

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

(1) Caribbean Basin country end product--

(i) Means an article that--

(A) Is wholly the growth, product, or manufacture of a Caribbean Basin country; or

(B) In the case of an article that consists in whole or in part of materials from another country, has been substantially transformed in a Caribbean Basin country into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. The term refers to a product offered for purchase under a supply contract, but for purposes of calculating the value of the end product includes services (except transportation services) incidental to its supply, provided that the value of those incidental services does not exceed the value of the product itself; and

(ii) Excludes products, other than petroleum and any product derived from petroleum, that are not granted duty-free treatment under the Caribbean Basin Economic Recovery Act (19 U.S.C. 2703(b)). These exclusions presently consist of--

(A) Textiles, apparel articles, footwear, handbags, luggage, flat goods, work gloves, leather wearing apparel, and handloomed, handmade, or folklore articles that are not granted duty-free status in the Harmonized Tariff Schedule of the United States (HTSUS);

(B) Tuna, prepared or preserved in any manner in airtight containers; and

(C) Watches and watch parts (including cases, bracelets, and straps) of whatever type, including, but not limited to, mechanical, quartz digital, or quartz analog, if such watches or watch parts contain any material that is the product of any country to which the HTSUS column 2 rates of duty (HTSUS General Note 3(b)) apply.

(2) Component means an article, material, or supply incorporated directly into an end product.

(3) Designated country means--

(i) A World Trade Organization Government Procurement Agreement (WTO GPA) country (Aruba, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, or the United Kingdom);

(ii) A Free Trade Agreement country (Australia, Bahrain, Canada, Chile, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Morocco, Nicaragua, or Singapore);

(iii) A least developed country (Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, East Timor, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Tanzania, Togo, Tuvalu, Uganda, Vanuatu, Yemen, or Zambia); or

(iv) A Caribbean Basin country (Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, or Trinidad and Tobago).

(4) Designated country end product means a WTO GPA country end product, a Free Trade Agreement country end product, a least developed country end product, or a Caribbean Basin country end product.

(5) End product means those articles, materials, and supplies to be acquired under this contract for public use.

(6) Free Trade Agreement country end product means an article that--

(i) Is wholly the growth, product, or manufacture of a Free Trade Agreement country; or

(ii) In the case of an article that consists in whole or in part of materials from another country, has been substantially transformed in a Free Trade Agreement country into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. The term refers to a product offered for purchase under a supply contract, but for purposes of calculating the value of the end product includes services (except transportation services) incidental to its supply, provided that the value of those incidental services does not exceed the value of the product itself.

(7) Least developed country end product means an article that--

(i) Is wholly the growth, product, or manufacture of a least developed country; or

(ii) In the case of an article that consists in whole or in part of materials from another country, has been substantially transformed in a least developed country into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. The term refers to a product offered for purchase under a supply contract, but for purposes of calculating the value of the end product includes services (except transportation services) incidental to its supply, provided that the value of those incidental services does not exceed the value of the product itself.

(8) Nondesignated country end product means any end product that is not a U.S.-made end product or a designated country end product.

(9) Qualifying country means any country set forth in subsection 225.872-1 of the Defense Federal Acquisition Regulation Supplement.

(10) Qualifying country end product means--

(i) An unmanufactured end product mined or produced in a qualifying country; or

(ii) An end product manufactured in a qualifying country if the cost of the following types of components exceeds 50 percent of the cost of all its components:

(A) Components mined, produced, or manufactured in a qualifying country.

(B) Components mined, produced, or manufactured in the United States.

(C) Components of foreign origin of a class or kind for which the Government has determined that sufficient and reasonably available commercial quantities of a satisfactory quality are not mined, produced, or manufactured in the United States.

(11) United States means the 50 States, the District of Columbia, and outlying areas.

(12) U.S.-made end product means an article that--

(i) Is mined, produced, or manufactured in the United States; or

(ii) Is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed.

(13) WTO GPA country end product means an article that--

(i) Is wholly the growth, product, or manufacture of a WTO GPA country; or

(ii) In the case of an article that consists in whole or in part of materials from another country, has been substantially transformed in a WTO GPA country into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed. The term refers to a product offered for purchase under a supply contract, but for purposes of calculating the value of the end product includes services (except transportation services) incidental to its supply, provided that the value of those incidental services does not exceed the value of the product itself.

(b) Unless otherwise specified, this clause applies to all items in the Schedule.

(c) The Contractor shall deliver under this contract only U.S.-made, qualifying country, or designated country end products unless--

(1) In its offer, the Contractor specified delivery of other nondesignated country end products in the Trade Agreements Certificate provision of the solicitation; and

(2)(i) Offers of U.S.-made, qualifying country, or designated country end products from responsive, responsible offerors are either not received or are insufficient to fill the Government's requirements; or

(ii) A national interest waiver has been granted.

(d) The contract price does not include duty for end products or components for which the Contractor will claim duty-free entry.

(e) The HTSUS is available on the Internet at <http://www.usitc.gov/tata/hts/bychapter/index.htm>. The following sections of the HTSUS provide information regarding duty-free status of articles specified in paragraph (a)(2)(ii)(A) of this clause:

(1) General Note 3(c), Products Eligible for Special Tariff Treatment.

(2) General Note 17, Products of Countries Designated as Beneficiary Countries Under the United States--Caribbean Basin Trade Partnership Act of 2000.

(3) Section XXII, Chapter 98, Subchapter II, Articles Exported and Returned, Advanced or Improved Abroad, U.S. Note 7(b).

(4) Section XXII, Chapter 98, Subchapter XX, Goods Eligible for Special Tariff Benefits Under the United States--Caribbean Basin Trade Partnership Act.

(End of clause)

## **I. 22 252.227-7013 RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS. (NOV 1995)**

(a) Definitions. As used in this clause:

(1) Computer data base means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.

(2) Computer program means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.

(3) Computer software means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.

(4) Computer software documentation means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

(5) Detailed manufacturing or process data means technical data that describe the steps, sequences, and conditions of manufacturing, processing or assembly used by the manufacturer to produce an item or component or to perform a process.

(6) Developed means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered

for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

(7) Developed exclusively at private expense means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.

(i) Private expense determinations should be made at the lowest practicable level.

(ii) Under fixed-price contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.

(8) Developed exclusively with government funds means development was not accomplished exclusively or partially at private expense.

(9) Developed with mixed funding means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.

(10) Form, fit, and function data means technical data that describes the required overall physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.

(11) Government purpose means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

(12) Government purpose rights means the rights to--

(i) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction; and

(ii) Release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes.

(13) Limited rights means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the technical data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another party, except that the Government may reproduce, release or disclose such data or authorize the use or reproduction of the data by persons outside the Government if reproduction, release, disclosure, or use is--

(i) Necessary for emergency repair and overhaul; or

(ii) A release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the Government and is required for evaluational or informational purposes;

(iii) Subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and

(iv) The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

(14) Technical data means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

(15) Unlimited rights means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in technical data. The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in technical data other than computer software documentation (see the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract for rights in computer software documentation):

(1) Unlimited rights.

The Government shall have unlimited rights in technical data that are--

(i) Data pertaining to an item, component, or process which has been or will be developed exclusively with Government funds;

(ii) Studies, analyses, test data, or similar data produced for this contract, when the study, analysis, test, or similar work was specified as an element of performance;

(iii) Created exclusively with Government funds in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes;

(iv) Form, fit, and function data;

(v) Necessary for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data);

(vi) Corrections or changes to technical data furnished to the Contractor by the Government;

(vii) Otherwise publicly available or have been released or disclosed by the Contractor or subcontractor without restrictions on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(viii) Data in which the Government has obtained unlimited rights under another Government contract or as a result of negotiations; or

(ix) Data furnished to the Government, under this or any other Government contract or subcontract thereunder, with--

(A) Government purpose license rights or limited rights and the restrictive condition(s) has/have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such data for commercial purposes has expired.

(2) Government purpose rights.

(i) The Government shall have government purpose rights for a five-year period, or such other period as may be negotiated, in technical data--

(A) That pertain to items, components, or processes developed with mixed funding except when the Government is entitled to unlimited rights in such data as provided in paragraphs (b)(ii) and (b)(iv) through (b)(ix) of this clause; or

(B) Created with mixed funding in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The five-year period, or such other period as may have been negotiated, shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the items, components, or processes or creation of the data described in paragraph (b)(2)(i)(B) of this clause. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the technical data.

(iii) The Government shall not release or disclose technical data in which it has government purpose rights unless-

(A) Prior to release or disclosure, the intended recipient is subject to the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS); or

(B) The recipient is a Government contractor receiving access to the data for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends.

(iv) The Contractor has the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this contract for any commercial purpose during the time period specified in the government purpose rights legend prescribed in paragraph (f)(2) of this clause.

### (3) Limited rights.

(i) Except as provided in paragraphs (b)(1)(ii) and (b)(1)(iv) through (b)(1)(ix) of this clause, the Government shall have limited rights in technical data--

(A) Pertaining to items, components, or processes developed exclusively at private expense and marked with the limited rights legend prescribed in paragraph (f) of this clause; or

(B) Created exclusively at private expense in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The Government shall require a recipient of limited rights data for emergency repair or overhaul to destroy the data and all copies in its possession promptly following completion of the emergency repair/overhaul and to notify the Contractor that the data have been destroyed.

(iii) The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical data furnished to the Government with limited rights. However, if the Government desires to obtain additional rights in technical data in which it has limited rights, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract. The license shall enumerate the additional rights granted the Government in such data.

### (4) Specifically negotiated license rights.

The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in technical data, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights than are enumerated in paragraph (a)(13) of this clause. Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights.

Technical data that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless--

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability.

The Contractor agrees to release the Government from liability for any release or disclosure of technical data made in accordance with paragraph (a)(13) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the data and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor data marked with restrictive legends.

(c) Contractor rights in technical data. All rights not granted to the Government are retained by the Contractor.

(d) Third party copyrighted data. The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted data in the technical data to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable data of the appropriate scope set forth in paragraph (b) of this clause, and has affixed a statement of the license or licenses obtained on behalf of the Government and other persons to the data transmittal document.

(e) Identification and delivery of data to be furnished with restrictions on use, release, or disclosure. (1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of this clause, technical data that the Contractor asserts should be furnished to the Government with restrictions on use, release, or disclosure are identified in an attachment to this contract (the Attachment). The Contractor shall not deliver any data with restrictive markings unless the data are listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the data, in the following format, and signed by an official authorized to contractually obligate the Contractor: Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data.

The Contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data should be restricted--

Technical data to be Furnished With Restrictions \1/	Basis for Assertion \2/	Asserted Rights Category \3/	Name of Person Asserting Restrictions \4/
(LIST)	(LIST)	(LIST)	(LIST)

\1/ If the assertion is applicable to items, components or processes developed at private expense, identify both the data and each such items, component, or process.



\2/ Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data pertaining to such items, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's rights should be restricted.

\3/ Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses).

\4/ Corporation, individual, or other person, as appropriate.

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

\_\_\_\_\_

Signature \_\_\_\_\_

(End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Restrictive Markings on Technical Data clause of this contract.

(f) Marking requirements. The Contractor, and its subcontractors or suppliers, may only assert restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data to be delivered under this contract by marking the deliverable data subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract: the government purpose rights legend at paragraph (f)(2) of this clause; the limited rights legend at paragraph (f)(3) of this clause; or the special license rights legend at paragraph (f)(4) of this clause; and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions. The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all technical data that qualify for such markings. The authorized legends shall be placed on the transmittal document or storage container and, for printed material, each page of the printed material containing technical data for which restrictions are asserted. When only portions of a page of printed material are subject to the asserted restrictions, such portions shall be identified by circling, underscoring, with a note, or other appropriate identifier. Technical data transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. Reproductions of technical data or any portions thereof subject to asserted restrictions shall also reproduce the asserted restrictions.

(2) Government purpose rights markings. Data delivered or otherwise furnished to the Government purpose rights shall be marked as follows:

Government Purpose Rights

Contract No. \_\_\_\_\_

Contractor Name \_\_\_\_\_

Contractor Address \_\_\_\_\_

---

Expiration Date \_\_\_\_\_

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(2) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Limited rights markings. Data delivered or otherwise furnished to the Government with limited rights shall be marked with the following legend:

Limited Rights

Contract No. \_\_\_\_\_

Contractor Name \_\_\_\_\_

Contractor Address \_\_\_\_\_

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The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(3) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above named Contractor.

(End of legend)

(4) Special license rights markings. (i) Data in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

Special License Rights

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these data are restricted by Contract No. \_\_\_\_\_ (Insert contract number) \_\_\_\_\_, License No. \_\_\_\_\_ (Insert license identifier) \_\_\_\_\_. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause).

(5) Pre-existing data markings. If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data deliverable under this contract, and those restrictions are still applicable, the Contractor may mark such data with the appropriate restrictive legend for which the data qualified under the prior contract or license. The marking procedures in paragraph (f)(1) of this clause shall be followed.

(g) Contractor procedures and records. Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver technical data with other than unlimited rights, shall--

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause; and

(2) Maintain records sufficient to justify the validity of any restrictive markings on technical data delivered under this contract.

(h) Removal of unjustified and nonconforming markings. (1) Unjustified technical data markings. The rights and obligations of the parties regarding the validation of restrictive markings on technical data furnished or to be furnished under this contract are contained in the Validation of Restrictive Markings on Technical Data clause of this contract. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures in the Validation of Restrictive Markings on Technical Data clause of this contract, a restrictive marking is determined to be unjustified.

(2) Nonconforming technical data markings. A nonconforming marking is a marking placed on technical data delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the Contractor of a nonconforming marking and the Contractor fails to remove or correct such marking within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming marking.

(i) Relation to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in technical data. (1) The Contractor shall not charge to this contract any cost, including, but not limited to, license fees, royalties, or similar charges, for rights in technical data to be delivered under this contract when--

(i) The Government has acquired, by any means, the same or greater rights in the data; or

(ii) The data are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause--

(i) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier technical data, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and

(ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the technical data will be delivered.

(k) Applicability to subcontractors or suppliers. (1) The Contractor shall ensure that the rights afforded its subcontractors and suppliers under 10 U.S.C. 2320, 10 U.S.C. 2321, and the identification, assertion, and delivery processes of paragraph (e) of this clause are recognized and protected.

(2) Whenever any technical data for noncommercial items is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in the subcontract or other contractual instrument, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher-tier subcontractor's or supplier's rights in a subcontractor's or supplier's technical data.

(3) Technical data required to be delivered by a subcontractor or supplier shall normally be delivered to the next higher-tier contractor, subcontractor, or supplier. However, when there is a requirement in the prime contract for

data which may be submitted with other than unlimited rights by a subcontractor or supplier, then said subcontractor or supplier may fulfill its requirement by submitting such data directly to the Government, rather than through a higher-tier contractor, subcontractor, or supplier.

(4) The Contractor and higher-tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in technical data from their subcontractors or suppliers. (5) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in technical data as an excuse for failing to satisfy its contractual obligations to the Government.

(End of clause)

## **I. 23 252.227-7014 RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION. (JUN 1995)**

(a) Definitions. As used in this clause:

(1) Commercial computer software means software developed or regularly used for nongovernmental purposes which--

(i) Has been sold, leased, or licensed to the public;

(ii) Has been offered for sale, lease, or license to the public;

(iii) Has not been offered, sold, leased, or licensed to the public but will be available for commercial sale, lease, or license in time to satisfy the delivery requirements of this contract; or

(iv) Satisfies a criterion expressed in paragraph (a)(1) (i), (ii), or (iii) of this clause and would require only minor modification to meet the requirements of this contract.

(2) Computer database means a collection of recorded data in a form capable of being processed by a computer. The term does not include computer software.

(3) Computer program means a set of instructions, rules, or routines, recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.

(4) Computer software means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae, and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer databases or computer software documentation.

(5) Computer software documentation means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

(6) Developed means that--

(i) A computer program has been successfully operated in a computer and tested to the extent sufficient to demonstrate to reasonable persons skilled in the art that the program can reasonably be expected to perform its intended purpose;

(ii) Computer software, other than computer programs, has been tested or analyzed to the extent sufficient to demonstrate to reasonable persons skilled in the art that the software can reasonably be expected to perform its

intended purpose; or

(iii) Computer software documentation required to be delivered under a contract has been written, in any medium, in sufficient detail to comply with requirements under that contract.

(7) Developed exclusively at private expense means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.

(i) Private expense determinations should be made at the lowest practicable level.

(ii) Under fixed-price contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.

(8) Developed exclusively with government funds means development was not accomplished exclusively or partially at private expense.

(9) Developed with mixed funding means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.

(10) Government purpose means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose computer software or computer software documentation for commercial purposes or authorize others to do so.

(11) Government purpose rights means the rights to--

(i) Use, modify, reproduce, release, perform, display, or disclose computer software or computer software documentation within the Government without restriction; and

(ii) Release or disclose computer software or computer software documentation outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose the software or documentation for United States government purposes.

(12) Minor modification means a modification that does not significantly alter the nongovernmental function or purpose of the software or is of the type customarily provided in the commercial marketplace.

(13) Noncommercial computer software means software that does not qualify as commercial computer software under paragraph (a)(1) of this clause.

(14) Restricted rights apply only to noncommercial computer software and mean the Government's rights to--

(i) Use a computer program with one computer at one time. The program may not be accessed by more than one terminal or central processing unit or time shared unless otherwise permitted by this contract;

(ii) Transfer a computer program to another Government agency without the further permission of the Contractor if the transferor destroys all copies of the program and related computer software documentation in its possession and notifies the licensor of the transfer. Transferred programs remain subject to the provisions of this clause;

(iii) Make the minimum number of copies of the computer software required for safekeeping (archive), backup, or modification purposes;

(iv) Modify computer software provided that the Government may--

(A) Use the modified software only as provided in paragraphs (a)(14) (i) and (iii) of this clause; and

(B) Not release or disclose the modified software except as provided in paragraphs (a)(14) (ii), (v) and (vi) of this clause;

(v) Permit contractors or subcontractors performing service contracts (see 37.101 of the Federal Acquisition Regulation) in support of this or a related contract to use computer software to diagnose and correct deficiencies in a computer program, to modify computer software to enable a computer program to be combined with, adapted to, or merged with other computer programs or when necessary to respond to urgent tactical situations, provided that--

(A) The Government notifies the party which has granted restricted rights that a release or disclosure to particular contractors or subcontractors was made;

(B) Such contractors or subcontractors are subject to the use and non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS) or are Government contractors receiving access to the software for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends;

(C) The Government shall not permit the recipient to decompile, disassemble, or reverse engineer the software, or use software decompiled, disassembled, or reverse engineered by the Government pursuant to paragraph (a)(14)(iv) of this clause, for any other purpose; and

(D) Such use is subject to the limitation in paragraph (a)(14)(i) of this clause; and

(vi) Permit contractors or subcontractors performing emergency repairs or overhaul of items or components of items procured under this or a related contract to use the computer software when necessary to perform the repairs or overhaul, or to modify the computer software to reflect the repairs or overhaul made, provided that--

(A) The intended recipient is subject to the use and nondisclosure agreement at DFARS 227.7103-7 or is a Government contractor receiving access to the software for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends; and

(B) The Government shall not permit the recipient to decompile, disassemble, or reverse engineer the software, or use software decompiled, disassembled, or reverse engineered by the Government pursuant to paragraph (a)(14)(iv) of this clause, for any other purpose.

(15) Unlimited rights means rights to use, modify, reproduce, release, perform, display, or disclose computer software or computer software documentation in whole or in part, in any manner and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in computer software or computer software documentation. The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in noncommercial computer software or computer software documentation. All rights not granted to the Government are retained by the Contractor.

(1) Unlimited rights. The Government shall have unlimited rights in--

(i) Computer software developed exclusively with Government funds;

(ii) Computer software documentation required to be delivered under this contract;

(iii) Corrections or changes to computer software or computer software documentation furnished to the Contractor

by the Government;

(iv) Computer software or computer software documentation that is otherwise publicly available or has been released or disclosed by the Contractor or subcontractor without restriction on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the software to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(v) Computer software or computer software documentation obtained with unlimited rights under another Government contract or as a result of negotiations; or

(vi) Computer software or computer software documentation furnished to the Government, under this or any other Government contract or subcontract thereunder with--

(A) Restricted rights in computer software, limited rights in technical data, or government purpose license rights and the restrictive conditions have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such software or documentation for commercial purposes has expired.

(2) Government purpose rights. (i) Except as provided in paragraph (b)(1) of this clause, the Government shall have government purpose rights in computer software development with mixed funding.

(ii) Government purpose rights shall remain in effect for a period of five years unless a different period has been negotiated. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the computer software or computer software documentation. The government purpose rights period shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the computer software.

(iii) The Government shall not release or disclose computer software in which it has government purpose rights to any other person unless--

(A) Prior to release or disclosure, the intended recipient is subject to the use and non-disclosure agreement at DFARS 227.7103-7; or

(B) The recipient is a Government contractor receiving access to the software or documentation for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government Furnished Information Marked with Restrictive Legends.

(3) Restricted rights. (i) The Government shall have restricted rights in noncommercial computer software required to be delivered or otherwise provided to the Government under this contract that were developed exclusively at private expense.

(ii) The Contractor, its subcontractors, or suppliers are not required to provide the Government additional rights in noncommercial computer software delivered or otherwise provided to the Government with restricted rights. However, if the Government desires to obtain additional rights in such software, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All noncommercial computer software in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract (see paragraph (b)(4) of this clause). The license shall enumerate the additional rights granted the Government.

(4) Specifically negotiated license rights. (i) The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in computer software, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights in computer software than are enumerated in paragraph (a)(14) of this clause or lesser rights in computer software documentation than are

enumerated in paragraph (a)(13) of the Rights in Technical Data--Noncommercial Items clause of this contract.

(ii) Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights. Computer software or computer software documentation that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless--

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability. The Contractor agrees to release the Government from liability for any release or disclosure of computer software made in accordance with paragraph (a)(14) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the software, and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor software marked with restrictive legends.

(c) Rights in derivative computer software or computer software documentation. The Government shall retain its rights in the unchanged portions of any computer software or computer software documentation delivered under this contract that the Contractor uses to prepare, or includes in, derivative computer software or computer software documentation.

(d) Third party copyrighted computer software or computer software documentation. The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted computer software or computer software documentation in the software or documentation to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable software or documentation of the appropriate scope set forth in paragraph (b) of this clause, and prior to delivery of such--

(1) Computer software, has provided a statement of the license rights obtained in a form acceptable to the Contracting Officer; or

(2) Computer software documentation, has affixed to the transmittal document a statement of the license rights obtained.

(e) Identification and delivery of computer software and computer software documentation to be furnished with restrictions on use, release, or disclosure. (1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of this clause, computer software that the Contractor asserts should be furnished to the Government with restrictions on use, release, or disclosure is identified in an attachment to this contract (the Attachment). The Contractor shall not deliver any software with restrictive markings unless the software is listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the software, in the following format, and signed by an official authorized to contractually obligate the Contractor: Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Computer Software.

The Contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or



disclose the following computer software should be restricted:

Computer Software to be Fur- nished With Restrictions *	Basis for Assertion **	Asserted Rights Category ***	Name of Person Asserting Restrictions ****
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\_\_\_\_\_

\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose computer software.

\*\* Indicate whether development was exclusively or partially at private expense. If development was not a private expense, enter the specific reason for asserting that the Government's rights should be restricted.

\*\*\* Enter asserted rights category (e.g., restricted or government purpose rights in computer software, government purpose license rights a prior contract, rights in SBIR software generated under another contract, or specifically negotiated licenses).

\*\*\*\* Corporation, individual, or other person, as appropriate.

Date

Printed Name and Title

Signature

End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Asserted Restrictions--Computer Software clause of this contract.

(f) Marking requirements. The Contractor, and its subcontractors or suppliers, may only assert restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose computer software by marking the deliverable software or documentation subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract; the government purpose rights legend at paragraph (f)(2) of this clause; the restricted rights legend at paragraph (f)(3) of this clause; or the special license rights legend at paragraph (f)(4) of this clause; and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions. The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all computer software that qualify for such markings. The authorized legends shall be placed on the transmitted document or software storage container and each page, or portions thereof, of printed material containing computer software for which restrictions are asserted. Computer software transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. However, instructions that interfere with or delay the operation of computer software in order to display a restrictive rights legend or other license statement at any time prior to or during use of the computer software, or otherwise cause such interference or delay, shall not be inserted in software that will or might be used in combat or situations that simulate combat conditions, unless the Contracting Officer's written permission to deliver such software has been obtained prior to delivery. Reproductions of computer software or any portions thereof subject to asserted restrictions, shall also reproduce the asserted restrictions.

(2) Government purpose rights markings. Computer software delivered or otherwise furnished to the Government with government purpose rights shall be marked as follows:

#### GOVERNMENT PURPOSE RIGHTS

Contract No.

Contractor Name

Contractor Address

Expiration Date

The Government's rights to use, modify, reproduce, release, perform, display, or disclose this software are restricted by paragraph (b)(2) of the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of the software or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Restricted rights markings. Software delivered or otherwise furnished to the Government with restricted rights shall be marked with the following legend:

#### RESTRICTED RIGHTS

Contract No.

Contractor Name

Contractor Address

The Government's rights to use, modify, reproduce, release, perform, display, or disclose this software are restricted by paragraph (b)(3) of the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause contained in the above identified contract. Any reproduction of computer software or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such software must promptly notify the above named Contractor.

(End of legend)

(4) Special license rights markings. (i) Computer software or computer documentation in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

#### SPECIAL LICENSE RIGHTS

The Government's rights to use, modify, reproduce, release, perform, display, or disclose this software are restricted by Contract No. (Insert contract number), License No. (Insert license identifier). Any reproduction of computer software, computer software documentation, or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause).

(5) Pre-existing markings. If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, release, perform, display, or disclose computer software or computer software documentation and those restrictions are still applicable, the Contractor may mark such software or documentation with the appropriate restrictive legend for which the software qualified under the prior contract or license. The marking procedures in paragraph (f)(1) of this clause shall be followed.

(g) Contractor procedures and records. Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver computer software or computer software documentation with other than unlimited rights, shall--

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause; and

(2) Maintain records sufficient to justify the validity of any restrictive markings on computer software or computer software documentation delivered under this contract.

(h) Removal of unjustified and nonconforming markings. (1) Unjustified computer software or computer software documentation markings. The rights and obligations of the parties regarding the validation of restrictive markings on computer software or computer software documentation furnished or to be furnished under this contract are contained in the Validation of Asserted Restrictions--Computer Software and the Validation of Restrictive Markings on Technical Data clauses of this contract, respectively. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures of those clauses, a restrictive marking is determined to be unjustified.

(2) Nonconforming computer software or computer software documentation markings. A nonconforming marking is a marking placed on computer software or computer software documentation delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the Validation of Asserted Restrictions--Computer Software or the Validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the Contractor of a nonconforming marking or markings and the Contractor fails to remove or correct such markings within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming markings.

(i) Relation to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in computer software or computer software documentation. (1) The Contractor shall not charge to this contract any cost, including but not limited to license fees, royalties, or similar charges, for rights in computer software or computer software documentation to be delivered under this contract when--

(i) The Government has acquired, by any means, the same or greater rights in the software or documentation; or

(ii) The software or documentation are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause--

(i) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier computer software or computer software documentation, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and

(ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the software or documentation will be delivered.

(k) Applicability to subcontractors or suppliers. (1) Whenever any noncommercial computer software or computer

software documentation is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in its subcontracts or other contractual instruments, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher tier subcontractor's or supplier's rights in a subcontractor's or supplier's computer software or computer software documentation.

(2) The Contractor and higher tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in computer software or computer software documentation from their subcontractors or suppliers.

(3) The Contractor shall ensure that subcontractor or supplier rights are recognized and protected in the identification, assertion, and delivery processes required by paragraph (e) of this clause.

(4) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in computer software or computer software documentation as an excuse for failing to satisfy its contractual obligation to the Government.

(End of clause)

## **I. 24 252.227-7017 IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS. (JUN 1995)**

(a) The terms used in this provision are defined in following clause or clauses contained in this solicitation--

(1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.

(c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.

(d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions *	Basis for Assertion **	Asserted Rights Category ***	Name of Person Asserting Restrictions ****
(LIST) *****	(LIST)	(LIST)	(LIST)

\*For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.

\*\*Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

\*\*\*Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

\*\*\*\*Corporation, individual, or other person, as appropriate.

\*\*\*\*\*Enter "none" when all data or software will be submitted without restrictions.

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

Signature \_\_\_\_\_

(End of identification and assertion)

(e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.

(f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

(End of provision)

## **I. 25 252.227-7022 GOVERNMENT RIGHTS (UNLIMITED) (MAR 1979)**

The Government shall have unlimited rights, in all drawings, designs, specifications, notes and other works developed in the performance of this contract, including the right to use same on any other Government design or construction without additional compensation to the Contractor. The Contractor hereby grants to the Government a paid-up license throughout the world to all such works to which he may assert or establish any claim under design

patent or copyright laws. The Contractor for a period of three (3) years after completion of the project agrees to furnish the original or copies of all such works on the request of the Contracting Officer.

(End of clause)

## **I. 26 252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)**

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

## **I. 27 252.236-7001 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)**

(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 that 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 that 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 on the following index of drawings:

If applicable, will be added per Task Order.

(End of clause)

## **I. 28 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)**

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

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

- (1) U.S.-flag vessels are not available for timely shipment;
  - (2) The freight charges are inordinately excessive or unreasonable; or
  - (3) Freight charges are higher than charges to private persons for transportation of like goods.
- (d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

- (1) Type, weight, and cube of cargo;
- (2) Required shipping date;
- (3) Special handling and discharge requirements;
- (4) Loading and discharge points;
- (5) Name of shipper and consignee;
- (6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

- (1) Prime contract number;
- (2) Name of vessel;
- (3) Vessel flag of registry;
- (4) Date of loading;
- (5) Port of loading;
- (6) Port of final discharge;
- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its



knowledge and belief--

- (1) No ocean transportation was used in the performance of this contract;
- (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
- (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or
- (4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL		_____

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(End of clause)

## **I. 29 252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)**

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

(End of Section I)

## **SECTION J**

### **LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**

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J5 CUSTOMER EVALUATION SHEET

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TITLE AND LOCATION						CONTRACTOR											
North Pacific Region - Governor Control System Retrofits																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION OR REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/  DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/  DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
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SUBMITTAL REGISTER											CONTRACT NO.						
TITLE AND LOCATION						CONTRACTOR											
North Pacific Region - Governor Control System Retrofits																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION OR REVIEW NUMBER	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/  DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/  DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		26 00 10.00 25	PLC Application Software Block	2.8.3.3	G HDC												
			Diagrams														
			PLC Application Software - Table	2.8.12.3	G HDC												
			Interpolation Method														
			PLC Application Software	2.8.3.3	G HDC												
			Development Suite														
			Human-Machine Interface (HMI)	1.6.2	G HDC												
			Equipment and Software														
			Catalog Data	2.1.4	G HDC												
			Contractor Furnished Training	3.4	G HDC												
			SD-06 Test Reports														
			Factory Tests	3.2.1	G- HDC												
			Field Tests	3.2.1	G- HDC												
			SD-07 Certificates														
			Erection Engineer Certifications	3.1.1.1	G HDC												
			Skilled Programmer Certifications	2.8.4.2	G HDC												
			SD-08 Manufacturer's Instructions														
			Equipment Installation Plan	2.1	G HDC												
			Equipment Installation Plan	2.2.1.2	G HDC												
			SD-10 Operation and Maintenance														
			Data														
			Operation and Maintenance	3.3	G HDC												
			Manuals														

<b>TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE</b> <i>(Read instructions on the reverse side prior to initiating this form)</i>			DATE		TRANSMITTAL NO.	
<b>SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS</b> <i>(This section will be initiated by the contractor)</i>						
TO:		FROM:		CONTRACT NO.		CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. <i>(Cover only one section with each transmittal)</i>		PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR <input type="checkbox"/> FIO <input type="checkbox"/> GOV'T. APPROVAL		
ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <i>(Type size, model number/etc.)</i>	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See instruction no. 8)</i>	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR VARIATION CE USE CODE
a.	b.	c.	d.	SPEC. PARA. NO. e.	DRAWING SHEET NO. f.	CONTRACTOR USE CODE g.
REMARKS			I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.			
<b>SECTION II - APPROVAL ACTION</b>						
ENCLOSURES RETURNED <i>(List by Item No.)</i>				NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY _____ NAME AND SIGNATURE OF CONTRACTOR _____		
DATE				DATE		

## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

### THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- |   |   |  |  |
|---|---|--|--|
| A -- Approved as submitted.   | E -- Disapproved (See attached).  |  |  |
| B -- Approved, except as noted on drawings.   | F -- Receipt acknowledged.  |  |  |
| C -- Approved, except as noted on drawings.<br>Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply<br>as noted with contract requirements. |  |  |
| D -- Will be returned by separate correspondence.   | G -- Other ( <i>Specify</i> )   |  |  |
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

## LISTING OF POWERHOUSES

NOTES: 1) Stand-alone cabinet maximum dimensions will be **84 inches x 36 inches x 36 inches (H x W x D)**.  
 2) Internal cabinet maximum dimensions will be **43 inches x 37 inches x 18 inches (H x W x D)**.

DISTRICT	POWERHOUSE	No. of Governors	Type of Cabinet		Number of HMIs in Control Room
			Stand-alone (See Note 1)	Internal (See Note 2)	
NWS	Albeni Falls	3		X	1
NWS	Chief Joseph	27		X	4
NWS	Libby	5		X	1
NWP	Bonneville II	10		X	2
NWP	The Dalles original units	16		X	2
NWP	The Dalles new units	8		X	1
NWP	John Day	16		X	2
NWP	Big Cliff	1	X		1
NWP	Cougar	2	X		1
NWP	Detroit	2	X		1
NWP	Dexter	1	X		1
NWP	Foster	2	X		1
NWP	Green Peter	2	X		1
NWP	Hills Creek	2	X		1
NWP	Lookout Point	3	X		1
NWP	Lost Creek	2	X		1
NWW	McNary	16		X	2
NWW	Ice Harbor	6	X		1
NWW	Lower Monumental	6	X		1
NWW	Little Goose	6		X	1
NWW	Lower Granite	6		X	1
NWW	Dworshak	3		X	1
<b>TOTAL:</b>		<b>145</b>			



## Experience Sheet

Circle Governor Type:

- Governor type 1: Woodward Governor Retrofit.  
Governor type 2: Pelton Governor Retrofit.  
Governor type 3: Allis – Chalmers Governor Retrofit.  
Governor type 4: Voest-Alpine Governor Retrofit.

1. Customer Organization: \_\_\_\_\_

Primary Point of Contact: \_\_\_\_\_

Position Title: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

2. Contract number, if applicable: \_\_\_\_\_

3. Location (powerhouse name, if applicable) and state or country: \_\_\_\_\_

4. Date contract and/or work began: \_\_\_\_\_

5. Date governor type was delivered or was substantially complete: \_\_\_\_\_

6. Indicate if prime or subcontractor on project: ☐ Prime or ☐ Subcontractor

7. Was this a Replacement Governor control system? ☐ Yes or ☐ No

Section J, Attachment No. J5  
Customer Evaluation Sheet (page 1 of 4)

You have been named as a reference for the contractor indicated in section 1 for solicitation W9127N-07-R-0031 for an IDIQ Governor Replacements and Upgrades contract. The contractor will fill in Section 1 for previously performed work. As the evaluator, please fill in Section 2; then rate the contractor's performance in Section 3. Return this survey to Amy Kelm, CENWP-CT-S, U.S. Army Corps of Engineers, PO Box 2946, Portland, OR 97208-2946, or fax 503-808-4605, NO LATER THAN NOON PST, 03 September 2008.

**Section 1: CONTRACTOR INFORMATION**

To be filled in by the contractor/requestor

1. Circle Governor Type:

Governor type 1: Woodward Governor Retrofit.

Governor type 2: Pelton Governor Retrofit.

Governor type 3: Allis – Chalmers Governor Retrofit.

Governor type 4: Voest-Alpine Governor Retrofit.

Contractor: \_\_\_\_\_

☐ Prime or ☐ Subcontractor

Prime Contractor (if Subcontractor): \_\_\_\_\_

Type and Size or Rating of Equipment Replaced or Upgrades and/or Services Performed:

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Brief Description of Work: \_\_\_\_\_

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---

Date Equipment Was Delivered or Substantially Completed: \_\_\_\_\_

Location (Powerhouse Name, State and Country): \_\_\_\_\_

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Section J, Attachment No. J5  
Customer Evaluation Sheet (page 2 of 4)

**Section 2: EVALUATOR INFORMATION**

To be filled in by the Evaluator/Customer

2. Organization: \_\_\_\_\_

Point of Contact: \_\_\_\_\_

Position Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Involvement in the Project: \_\_\_\_\_

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### Section 3: EVALUATION FORM

Rating Definitions:

Good – The contractor meets and sometimes exceeds expectations.

Satisfactory – The contractor consistently meets expectations.

**Marginal** – The contractor sometimes fails to meet expectations.

Unsatisfactory – The contractor frequently fails to meet expectations.

	E	G	S	M	U
A. Quality of replacement or upgrade work:					

Comments: \_\_\_\_\_

	E	G	S	M	U
B. Quality of replacement or upgrade equipment:					

Comments:

	E	G	S	M	U
C. Management's responsiveness to client's needs:					

Comments:

D. Contractor's timeliness on issues within his control: E G S M U

Comments: \_\_\_\_\_

Section J, Attachment No. J5  
Customer Evaluation Sheet (page 4 of 4)

E. Costs of Contractor-driven modifications:

E G S M U

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ADDITIONAL COMMENTS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## **SECTION K**

### **REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS**

K. 1	52.203-2	CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)
K. 2	52.203-11	CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)
K. 3	52.204-3	TAXPAYER IDENTIFICATION (OCT 1998)
K. 4	52.204-5	WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)
K. 5	52.204-8	ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)
K. 6	52.207-4	ECONOMIC PURCHASE QUANTITY--SUPPLIES (AUG 1987)
K. 7	52.209-5	CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)
K. 8	52.222-25	AFFIRMATIVE ACTION COMPLIANCE (APR 1984)
K. 9	252.209-7001	DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (OCT 2006)
K. 10	252.209-7002	DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT (JUN 2005)
K. 11	252.225-7020	TRADE AGREEMENTS CERTIFICATE (JAN 2005)
K. 12	252.247-7022	REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

## **SECTION K**

### **REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS**

#### **K. 1 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)**

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision \_\_\_\_\_ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

**K. 2 52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)**

(a) Definitions. As used in this provision--"Lobbying contact" has the meaning provided at 2 U.S.C. 1602(8). The terms "agency," "influencing or attempting to influence," "officer or employee of an agency," "person," "reasonable compensation," and "regularly employed" are defined in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" (52.203-12).

(b) Prohibition. The prohibition and exceptions contained in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" (52.203-12) are hereby incorporated by reference in this provision.

(c) Certification. The offeror, by signing its offer, hereby 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 its behalf in connection with the awarding of this contract.

(d) Disclosure. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(e) Penalty. Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by 31 U.S.C. 1352. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure required to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

**K. 3 52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)**

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) 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 IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.



(c) 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.

(d) 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.

(e) 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-----

(f) Common parent.

\_\_\_ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

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

Name-----

TIN-----

(End of provision)

**K. 4 52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)**

(a) Definition. Women-owned business concern, as used in this provision, means a concern 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; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it ( ) is a women-owned business concern.

(End of provision)

**K. 5 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)**

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 335312.

(2) The small business size standard is 1000 employees..

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (b) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

☐ Paragraph (c) applies.

☐ Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

-----  
FAR Clause      Title              Date              Change  
-----

-----  
-----  
Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

**K. 6 52.207-4 ECONOMIC PURCHASE QUANTITY--SUPPLIES (AUG 1987)**

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals or quotes are requested in this solicitation is (are) economically advantageous to the Government.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Each offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

	OFFEROR RECOMMENDATIONS		
	PRICE		
ITEM	QUANTITY	QUOTATION	TOTAL

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a data base for future acquisitions of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit with respect to any individual item in the event quotations received and the Government's requirements indicate that different quantities should be acquired.

(End of provision)

**K. 7 52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)**

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

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

(B) 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 public (Federal, state, or local) 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

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) The Offeror has ( ) has not ( ), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

#### **K. 8 52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 1984)**

The offeror represents that

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

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

(End of provision)

**K. 9 252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE  
GOVERNMENT OF A TERRORIST COUNTRY (OCT 2006)**

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries subject to this provision include: Cuba, Iran, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

**K. 10 252.209-7002 DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN  
GOVERNMENT (JUN 2005)**

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

(1) “Effectively owned or controlled” means that a foreign government or any entity controlled by a foreign government has the power, either directly or indirectly, whether exercised or exercisable, to control the election, appointment, or tenure of the Offeror’s officers or a majority of the Offeror’s board of directors by any means, e.g., ownership, contract, or operation of law (or equivalent power for unincorporated organizations).

(2) “Entity controlled by a foreign government”—

(i) Means—

(A) Any domestic or foreign organization or corporation that is effectively owned or controlled by a foreign government; or

(B) Any individual acting on behalf of a foreign government.

(ii) Does not include an organization or corporation that is owned, but is not controlled, either directly or indirectly, by a foreign government if the ownership of that organization or corporation by that foreign government was effective before October 23, 1992.

(3) “Foreign government” includes the state and the government of any country (other than the United States and its outlying areas) as well as any political subdivision, agency, or instrumentality thereof.

(4) “Proscribed information” means—

(i) Top Secret information;

(ii) Communications Security (COMSEC) information, except classified keys used to operate secure telephone units (STU IIIs);

(iii) Restricted Data as defined in the U.S. Atomic Energy Act of 1954, as amended;

(iv) Special Access Program (SAP) information; or

(v) Sensitive Compartmented Information (SCI).

(b) *Prohibition on award.* No contract under a national security program may be awarded to an entity controlled by a foreign government if that entity requires access to proscribed information to perform the contract, unless the Secretary of Defense or a designee has waived application of 10 U.S.C. 2536(a).

(c) *Disclosure.* The Offeror shall disclose any interest a foreign government has in the Offeror when that interest constitutes control by a foreign government as defined in this provision. If the Offeror is a subsidiary, it shall also disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the Offeror’s immediate parent, intermediate parents, and the ultimate parent. Use separate paper as needed, and provide the information in the following format:

Offeror’s Point of Contact for Questions about Disclosure  
(Name and Phone Number with Country Code, City Code  
and Area Code, as applicable)

Name and Address of Offeror

Name and Address of Entity Controlled by a  
Foreign Government

Description of Interest, Ownership Percentage,  
and Identification of Foreign Government

(End of provision)

**K. 11 252.225-7020 TRADE AGREEMENTS CERTIFICATE (JAN 2005)**

(a) Definitions. Designated country end product, nondesignated country end product, qualifying country end product, and U.S.-made end product have the meanings given in the Trade Agreements clause of this solicitation.

(b) Evaluation. The Government--

(1) Will evaluate offers in accordance with the policies and procedures of part 225 of the Defense Federal Acquisition Regulation Supplement; and

(2) Will consider only offers of end products that are U.S.-made, qualifying country, or designated country end products unless--

(i) There are no offers of such end products;

(ii) The offers of such end products are insufficient to fulfill the Government's requirements; or

(iii) A national interest waiver has been granted.

(c) Certification and identification of country of origin.

(1) For all line items subject to the Trade Agreements clause of this solicitation, the offeror certifies that each end product to be delivered under this contract, except those listed in paragraph (c)(2) of this provision, is a U.S.-made, qualifying country, or designated country end product.

(2) The following supplies are other nondesignated country end products:

(Line Item Number) (Country of Origin)

(End of provision)

**K. 12 252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)**

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

\_\_\_\_ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

(End of Section K)



## **SECTION L**

### **INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS**

- L.1 ACQUISITION PROCESS
- L.2 GENERAL INFORMATION
- L.3 52.215-1 – INSTRUCTIONS TO OFFERORS – COMPETITIVE ACQUISITION
- L.4 PROPOSAL INFORMATION
- L.5 PROPOSAL FORMAT
- L.6 VOLUME 1, TECHNICAL
- L.7 VOLUME 2. PRICE PROPOSAL
- L.8 52.211-6 BRAND NAME OR EQUAL (AUG 1999)
- L.9 52.216-1 – TYPE OF CONTRACT
- L.10 52.233-2 – SERVICE OF PROTEST
- L.11 52.252-1 – SOLICITATION PROVISIONS INCORPORATED BY REFERENCE

## SECTION L

### INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

#### L.1 ACQUISITION PROCESS

The requirement for the NORTH PACIFIC REGION GOVERNOR CONTROL SYSTEMS RETROFITS will be procured through the use of Source Selection Procedures as defined in FAR 15.3. The Request for Proposal (RFP) requires prospective offerors to develop and submit a Technical Proposal, which will be evaluated in accordance with Section M, EVALUATION FACTORS FOR AWARD. THE CONTRACT WILL BE AWARDED TO THE OFFEROR SUBMITTING THE LOWEST PRICED TECHNICALLY ACCEPTABLE OFFER.

**NOTE: As prescribed by FAR 52.215-1, the Government may award a contract on the basis of initial offers received, without discussion. Therefore, each initial offer should contain the offeror's best terms from a price and technical standpoint.**

#### L.2 GENERAL INFORMATION

These instructions provide guidance to the Offeror in preparing the proposal and describe the approach for development and presentation of the proposed data in response to this solicitation. The proposal shall include all of the information requested in these instructions. FAILURE TO FULLY COMPLY WITH THESE INSTRUCTIONS MAY BE CAUSE FOR REJECTION OF THE PROPOSAL.

a. Telegraphic and/or Facsimile Offers and Submissions. Telegraphic and/or facsimile offers are not authorized. The Government reserves the right, at the sole discretion of the Contracting Officer, to authorize facsimile submissions when additional information is requested. The Government reserves the right to make award solely on the facsimile signature(s). If requested to do so, the Offeror shall submit original(s) to replace facsimile page(s).

b. Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

c. Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

d. Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

e. Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

f. Offer expiration date: Proposals in response to this solicitation will be valid for 60 days (unless a different period is proposed by the offeror).

g. The Government may reject any or all proposals if such action is in the Government's interest.

h. The Government may waive informalities and minor irregularities in proposals Received.

i. Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

j. The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

k. A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

### **L.3 52.215-1 – INSTRUCTIONS TO OFFERORS – COMPETITIVE ACQUISITION**

(a) *Definitions.* As used in this provision --

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer’s discretion, result in the offeror being allowed to revise its proposal.”

“In writing,” “writing,” or “written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation’s closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time,” if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) *Amendments to solicitations.* If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) *Submission, modification, revision, and withdrawal of proposals.*

(1) Unless other methods (*e.g.*, electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages

(i) addressed to the office specified in the solicitation, and

(ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show --

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

*(3) Submission, modification, revision, and withdrawal of proposals.*

(i) Offerors are responsible for submitting proposals, and any modification, or revisions, 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 proposal or revision is due.

(ii)

(A) Any proposal, modification, or revision 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 --

(1) 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 proposals; or

(2) 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

(3) It is the only proposal received.

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

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

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals 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.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) *Offer expiration date.* Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) *Restriction on disclosure and use of data.* Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall --

(1) Mark the title page with the following legend:

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of -- or in connection with -- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [*insert numbers or other identification of sheets*]; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) *Contract award.*

(1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(iv) A summary of the rationale for award.

(v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of Provision)

## L.4 PROPOSAL INFORMATION

All solicitation documents will be posted to the Army Single Face to Industry (ASFI) website. The website address is: <https://acquisition.army.mil/asfi/>. Copies of the solicitation are available by internet access only. All amendments will be posted to the website. It shall be the contractor's responsibility to check the website for any amendments. The offeror shall include in their proposal all requested information specified in Section L of this solicitation.

### L.4.1 Offeror Solicitation Questions

#### L.4.1.1 ProjNet-Bidsm

All inquiries regarding this solicitation are to be submitted via ProjNet-Bidsm. Telephone and email inquiries will not be accepted. ProjNet-Bidsm is a web-based program that allows bidders to post questions regarding the solicitation and to view all questions by other bidders and answers by USACE. ProjNet-Bidsm can be accessed through ProjNetSm at <https://www.projnet.org/projnet/>.

To access the ProjNet-Bidsm website the first time:

- 1) Click the Bid tab
- 2) Click Bidder Inquiry. (The Agency is USACE.)
- 3) Enter the following information for access:
  1. The Bidder Inquiry Key : P12Q1H-WEEDY8.
  2. Valid business contact information (e.g. Company name, contact person, business address, phone number and email address). (Required on first project only)
  3. Establish secret question and answer which will be used as a password (Required on first project only)
  4. For subsequent access use your email address, the Bid Inquiry Key and response to the secret question to access the ProjNet-Bidsm Module.
- 4) Submit questions or review questions and answers. (A bidder who submits a question will receive an automated email notification that their question has been received. When an answer is posted to a question, the question and answer is then available for all other bidders to review.
- 5) For a specific step-by-step for POSTING YOUR INQUIRIES, is available in the Reference link on the Contract Viewer.
- 6) For questions about the ProjNet-Bidsm, please contact the Call Center help desk toll free at 1-800-428-HELP, which operates from 8AM to 5PM (Central US time zone). ProjNet-Bidsm questions can also be emailed to the helpdesk at [staff@rcesupport.com](mailto:staff@rcesupport.com).

**No response will be posted to inquiries after the Close of Business on the fifth business day preceding the solicitation due date. All bidders will be held to have reviewed the questions and responses in ProjNet-Bidsm prior to bid submission. Nothing in the solicitation is changed unless an amendment is sent out.**

#### L.4.1.2 Contractual and Technical Points of Contact:

Contractual:  
Amy Kelm  
Portland District, Corps of Engineers  
Attn: Amy Kelm, CENWP-CT-S  
PO Box 2946  
Portland, OR 97208-2946  
Phone: 503-808-4606  
Fax: 503-808-4605  
E-mail: [amy.a.kelm@usace.army.mil](mailto:amy.a.kelm@usace.army.mil)

Technical:  
Clayton Fouts  
Portland District, Corps of Engineers  
Attn: Clayton Fouts, CENWP-HDC-E  
PO Box 2946  
Portland, OR 97208-2946  
Phone: 503-808-4266  
Fax: 503-808-4202  
E-mail: Clayton.A.Fouts@usace.army.mil

#### L.4.2 Proposal Expenses and Pre-contract Costs

This Request for Proposal (RFP) does not commit the Government to pay any costs incurred in the preparation and submission of a proposal or for any other costs incurred by any firm submitting a proposal in response to this solicitation.

#### L.4.3 Proposal Submittal

2008 at: Proposals will be received, as stated on the Standard Form SF 33, until 1600PDT on 03 September

Portland District, Corps of Engineers  
Attn: Amy Kelm, CENWP-CT-S  
PO Box 2946  
Portland, OR 97208-2946

Proposals shall be marked: Proposals for Solicitation W9127N-07-R-0031.

### **L.5 PROPOSAL FORMAT**

#### L.5.1 Basic Proposal Information

All proposals shall contain the information listed below and as required by this solicitation and be bound into volumes with a cover sheet displaying the RFP number, contractor name, and an index of the sections of each volume. Proposal clarity, organization and the overall page limitations are required. The entire proposal shall be limited to the maximum number of pages identified in Paragraph L.5.2. The volumes shall include, as a minimum, the following:

- (a) Volume number on proposal cover.
- (b) A statement on the cover page that the offer has an acceptance period of 90 calendar days from the date the offer is submitted.
- (c) The prime, consortium, or joint venture's name, address, a signature of the official that can bind the firm, and a telephone number shall appear in the lower left corner of the proposal cover, title page and table of contents of any document/volume to be evaluated. Proposal volume cover format is at the offeror's discretion so long as the information required by this paragraph and subsequent paragraphs are met.
- (d) Amendments: Acknowledge all amendments by number and date of issue in your cover letter. NOTE: If discussions are held, acknowledge all amendments issued on the cover letter submitted with your revised proposals or final proposal revisions.
- (e) Table of contents and a cross-reference to the solicitation paragraphs.



(f) Volume number, section and date submitted shall appear in the bottom right corner of each page (along with the revision number for the amended page, if necessary).

(g) Section tabs for each factor under Volumes One and Two.

(h) Sub-section tabs under each applicable section tab marked by each of the five governor types listed under paragraph C.2.2.

#### L.5.2 Page Limitation

The total number of pages for Volume I and Volume II **shall not exceed one hundred sixty (160) pages**. These are the maximum limits for Volume I and Volume II of each proposal, excluding the following that is information not considered in the page count limitation: the Proposal Cover, the Table of Contents, Title Page, the List of Tables/Figures, or Acronyms, Separator Tabs, and Cross-Reference to the Solicitation Paragraphs and representations and certifications.

If the proposal exceeds the page limits set, the excess pages will not be evaluated

Each page should be numbered consecutively within each section. The page size of the Offeror's proposal shall not exceed an 8-1/2 inch by 11-inch sheet of paper. Please refer to Section I, FAR Part 52.204-4 for printing/duplicating instructions.

**NOTE: Double sided copies are considered as two pages.**

Page limitation shall include typewritten text pages, charts, graphs, figures, diagrams, schematics, etc., aside from those items specifically stated as exempt from the page count. Outlines and other similar information documents shall be included as numbered pages – no exceptions. When included, foldout pages shall fold entirely within the volume. Each foldout page in excess of 8-1/2 inch by 11-inch shall count as two pages. The volumes are limited to single spaced typewritten pages using 10 or 12 characters per inch, 12-point proportional font or equivalent as the "normal" size standards for text. A smaller type may be used on charts, graphs, figures, diagrams, and schematics to accommodate a "make to fit" software capability, however all text shall be legible and easily read.

Three-ring binders are preferred.. Do not use spring clamps or exceed the recommended capacity of the fasteners or binds. Do not use plastic multi-hole/spiral binding systems, heat-binding systems, or other systems that do not facilitate the ready insertion of additional pages.

Please ensure that the outside of each separate volume is clearly marked to indicate its contents and the identity of the offeror. Additionally, the original cost/price proposal and original technical proposal should be clearly indicated on the outside cover.

#### L.5.3 Format

The offeror shall submit **one (1) original** and **six (6) copies** of their proposal in the format shown below:

<b>Table 1: Proposal Format</b>
<b>Volume 1: Technical</b>
Tab 1- Experience
Tab 2 - Past Performance
<b>Volume 2: Price Proposal</b>

## **L.6 VOLUME 1, TECHNICAL**

L.6.1 VOLUME 1 – Technical, shall consist of information for each type of equipment or work the contractor is capable of providing/rehabilitating/performing (see Paragraph C.2.2). Each offeror shall provide information on their experience and past performance for the last 5 years as noted below.

L.6.2 FACTOR 1: Experience. Each offeror shall complete Experience Sheet(s) as provided (Section J, Attachment No.J4) for governor control systems with a digital control system that the contractor, as a prime or subcontractor, has replaced within the last 5 years. A minimum of five, but no more than ten completed Experience Sheets shall be submitted. Offerors shall provide experience for at least two of the four types of governors as indicated below in item (7).

*Note for ongoing work, the work does not have to be completed as long as at least one replacement has been delivered and completed.*

The following information is required for each item of equipment submitted for experience:

- 1) Customer Organization, primary point of contact and position held, address, and phone;
- 2) Contract number, if applicable;
- 3) Location (powerhouse name) & state or country;
- 4) Date contract and/or work began;
- 5) Date item of equipment was delivered and installation was substantially complete;
- 6) Indicate if prime or subcontractor on project; and,
- 7) The type of governor types 1 through 4.
  - Governor type 1: Woodward Governor Retrofit.
  - Governor type 2: Pelton Governor Retrofit.
  - Governor type 3: Allis – Chalmers Governor Retrofit.
  - Governor type 4: Voest-Alpine Governor Retrofit.

L.6.3 FACTOR 2: Past Performance. All offerors shall contact their clients and have them complete a Customer Evaluation Sheet (Section J, Attachment No.J5) for the contracts/projects submitted above for FACTOR 1: Experience. Evaluations will only be accepted on the provided form. Only evaluations for work listed under Experience (L.6.2) may be submitted. Customer Evaluation Sheets need to be returned to this office by the closing date for this solicitation. Evaluations received after the solicitation closing date will not be considered. Copies of the offeror's pre-filled section of the Customer Evaluation Sheets shall be inserted in Tab 2 of Volume 1 of the proposal.

## **L.7 VOLUME 2. PRICE PROPOSAL**

L.7.1 VOLUME 2 – Price Proposal, shall consist of the following:

1. Section A, Solicitation, Offer and Award (SF33). Complete blocks 15 thru 16, and sign/date blocks 17 and 18.
2. Section B, Bid Schedule, furnish prices for all contract line items (CLINs).
3. Section K, Representations and Certifications. Complete as applicable.
4. If a large business, a Subcontracting Plan in the “NOTICE TO LARGE BUSINESS FIRMS” letter enclosed with this solicitation.

## **L.8     52.211-6   BRAND NAME OR EQUAL (AUG 1999)**

(a) If an item in this solicitation is identified as “brand name or equal,” the purchase description reflects the characteristics and level of quality that will satisfy the Government's needs. The salient physical, functional, or performance characteristics that “equal” products must meet are specified in the solicitation.

(b) To be considered for award, offers of “equal” products, including “equal” products of the brand name manufacturer, must--

(1) Meet the salient physical, functional, or performance characteristic specified in this solicitation;

(2) Clearly identify the item by--

(i) Brand name, if any; and

(ii) Make or model number;

(3) Include descriptive literature such as illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modifications the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modifications.

(c) The Contracting Officer will evaluate “equal” products on the basis of information furnished by the offeror or identified in the offer and reasonably available to the Contracting Officer. The Contracting Officer is not responsible for locating or obtaining any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an “equal” product, the offeror shall provide the brand name product referenced in the solicitation.

(End of provision)

## **L.9     52.216-1 – TYPE OF CONTRACT**

The Government intends to award of an Indefinite Delivery/ Indefinite Quantity (IDIQ) contract resulting from this solicitation.

(End of Provision)

## **L.10    52.233-2 – SERVICE OF PROTEST**

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Department of the Army Portland District, Corps of Engineers Attn: Contracting Officer, CENWP-CT-S PO Box 2946 Portland, OR 97208-2946.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of Provision)

## **L.11 52.252-1 – SOLICITATION PROVISIONS INCORPORATED BY REFERENCE**

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): <http://farsite.hill.af.mil/>, <http://www.arnet.gov/far/>.

(End of Provision)

(End Section L)

**Section M**  
**Evaluation Factors for Award**

- M.1 Evaluation Criteria for Award
- M.2 Technical Proposal - Volume I
- M.3 Price Proposal – Volume II

## **Section M**

### **Evaluation Factors for Award**

#### **M.1 EVALUATION CRITERIA FOR AWARD**

##### **M.1.1 General**

The Government will establish an evaluation board to conduct an evaluation of each proposal received. The board will consist of technical and procurement personnel. The evaluation will be based on the evaluation criteria established for each Technical Evaluation Factor as noted below. The evaluation board will not consider any information or data incorporated by reference or otherwise referred to.

##### **M.1.2 BASIS OF AWARD**

Award will be made to the responsible offeror submitting the lowest priced, technically acceptable offer. To be determined technically acceptable, the offer must receive a rating of "Satisfactory" for each of the two Technical Evaluation Factors listed in Paragraph M.1.2.1.

It is the Government's intent to award one Indefinite Delivery Indefinite Quantity (IDIQ) type contract resulting from this solicitation to the responsible offeror whose offer conforms to the solicitation and meets the above stated award criteria.

##### **M.1.2.1 Technical Evaluation Factors**

The factors below will be rated as Satisfactory or Unsatisfactory.

##### **Factor 1: Experience**

In order to receive a rating of "satisfactory" for Factor 1, the offeror must submit at least 5 Experience Sheets rated as "satisfactory" for at least 2 of the 4 types of governors (see M.2.1).

##### **Factor 2: Past Performance**

In order to receive a rating of "satisfactory" for Factor 2, at least 1 Customer Evaluation Sheet for 2 of the 4 types of governors submitted under Factor 1 must be returned with a customer rating of at least "satisfactory" for four of the five questions to be rated on the Customer Evaluation Sheet (see M.2.2).

The Government reserves the right to call references and ask questions pertaining to the submitted experience and past performance received. Furthermore, the Government reserves the right to use other information, e.g. personal knowledge, past performance information systems, etc. to evaluate the past performance of the Offeror.

**M.1.2.2 Price.** Completed pricing schedule. The total evaluated cost will be calculated by summing the total proposed price for the base and option year period.

#### **M.2 TECHNICAL PROPOSAL – VOLUME I**

The Technical Proposal, Volume I, consists of the following two Technical Evaluation Factors. The evaluation criteria for each factor is indicated below. In order that evaluation may be accomplished on the merit of the material submitted, no dollar costs are to be included in Volume I.

#### M.2.1 FACTOR 1: Experience

All experience of the contractor, as either a prime or subcontractor, will be rated on the basis of offerors submitted experience related to governor types 1 through 5, as listed below (also reference C.2.2).

a Governor type 1 – Woodward Governor Retrofit: In order for a proposal to receive a satisfactory rating for equipment type 1, experience must include the retrofit of Woodward Mechanical or Analog Electric Governors' control system with a digital control system.

b. Governor type 2 – Pelton Governor Retrofit: In order for a proposal to receive a satisfactory rating for equipment type 2, experience must include the retrofit of Pelton Mechanical or Analog Electric Governors' control system with digital control system .

c. Governor type 3 – Allis Chalmers Governor Retrofit: In order for a proposal to receive a satisfactory rating for equipment type 3, experience must include the retrofit of Allis Chalmers Mechanical or Analog Electric Governors' control system with digital control system .

d. Governor type 4 - Voest-Alpine Governor Retrofit: In order for a proposal to receive a satisfactory rating for equipment type 4, experience must include the retrofit of Voest-Alpine Mechanical or Analog Electric Governors' control system with digital control system.

#### M.2.2 FACTOR 2: Past Performance.

The proposal will be rated for past performance of the offeror as either a prime or subcontractor. Past performance will be rated on the basis of returned Customer Evaluation Sheets from customers. Past Performance will only be considered for those references submitted under Factor 1, Experience. *To receive a satisfactory rating on a questionnaire*, four of the five questions on the Customer Evaluation Sheet must receive a minimum rating of satisfactory.

### **M.3 PRICE PROPOSAL – VOLUME II**

M.3.1. The Price Proposal shall be complete, detailed and submitted on forms provided in the Request for Proposal. Contractors shall complete all line items in Section B, SUPPLIES, SERVICES AND PRICES/COSTS. The reasonableness of each offeror's price proposal will be evaluated based on the Government's cost estimates.

(End of Section M)