

Superfund Record
SITE:
BREAK:
OTHER:

ATTACHMENT 9
Additional Remediations of Areas Around
Buildings 10, 12, AND 17.

10/20/2000



TEXAS INSTRUMENTS INCORPORATED
Attleboro, Massachusetts

Remediation of Building 10 Laboratory Wing Area (Exterior)

NRC License/Docket No: SNM-23/70-33

Final Report

Version 1.0

Prepared by

CPS Environmental, Inc.
June 1996

Remediation of Building 10 Laboratory Wing Area (Exterior)

Description

This report describes the remediation activities of an area described as the laboratory wing area of Building 10 at the Texas Instruments Incorporated Attleboro Site under USNRC License number SNM-23. The principal contaminate identified at this site was uranium from the former fuel fabrication activities at this site. The decommissioning criteria as established within the site remediation plan is 30 pCi/g total uranium. The Building 10 Laboratory Wing Area is described in detail within the documents entitled "Supplement to the 1992 Remediation Plan" and "Radiological Surveys of Open Land Areas." (Ref. 1,2)

Characterization

Radiological surveys conducted within this area include walk over scans, static measurements, and sub surface soil samples. The subsurface soil samples identified an area of contamination of approximately 120 m² extending in depth to approximately 0.6 m. This area is located at the grid coordinates 140-152N x 120- 130E as defined on reference map CPS-TI-0106H and CPS-TI-0106A. The subsurface contamination identified at this location had a maximum value of 122 pCi/g at 150N x 120 E (0-2' depth) with a Grid Cell Average of 32 pCi/g total uranium. The results of these radiological surveys are presented in detail within the report entitled "Radiological Surveys of Open Land Areas." (Ref. 2)

Excavation

Remediation of this area was conducted concurrently with the remediation activities of the "Metals Recovery Area". (Ref. 3) The methodology used in the performance of remediation activities was in accordance with the requirements put forth in the "Supplement to the 1992 Remediation Plan". Total volume excavated was 38.2 m³ (1350 ft³) (Ref. 4) and was dispositioned along with material from the metals recovery area.

Final Status Survey

Final Status surveys were conducted in the manner specified within the "Supplement to the 1992 Remediation Plan", and included surface soil samples from the floor of the excavation, walk over scans of the floor of excavation, and subsurface soil samples in adjoining grids.

All samples and measurements demonstrated results less than the criteria. Soil sample results were obtained using the gross alpha counting technique as described within reference 1, 2, and 3. The survey data is presented within the attached tables and figures as follows: Table 1, "Building 10 Laboratory Wing Excavation Floor Soil Sample Locations and Grid Cell Averages"; Figure 1, "Building 10 Laboratory Wing Excavation Floor Soil Sample Locations", and Figure 2, "Building 10 Laboratory Wing Excavation Floor Grid Cell Averages". In addition, "D" size drawings are provided of Figure 1 and 2 as CPS-TI-0106I and CPS-TI-0106J respectively.

References:

1. *Supplement to the 1992 Remediation Plan*, Texas Instruments Incorporated, December 1994.
2. *Radiological Surveys of Open Land Areas*, CPS Environmental Inc., January 1995
3. *Remediation of the Metals Recovery Area*, Final Report, CPS Environmental, Inc., September 1995
4. Communication with E. Otis Dyer to Mark A. Griffon Regarding Excavation Volume Estimates, June 4, 1996.

**Table 1: Building 10 Laboratory Wing
Excavation Floor Soil Sample Locations and Grid Cell Averages**

GRID LOCATION	SAMPLE LOCATION	SAMPLE ID	SAMPLE RESULTS
160Nx120E	150Nx121E	F10-3	2
	150Nx123E	F10-6	19
	150Nx126E	F10-9	2
		<u>AVERAGE</u>	<u>7.666666667</u>
150Nx120E	150Nx121E	F10-3	2
	150Nx123E	F10-6	19
	150Nx126E	F10-9	2
	144Nx123E	F10-1	2
	147Nx121E	F10-2	21
	144Nx123E	F10-4	27
	147Nx123E	F10-5	17
	144Nx126E	F10-7	29
	147Nx126E	F10-8	24
		<u>AVERAGE</u>	<u>15.88888889</u>

Figure 1
Building 10 Laboratory Wing : Excavation Floor Soil Sample Locations

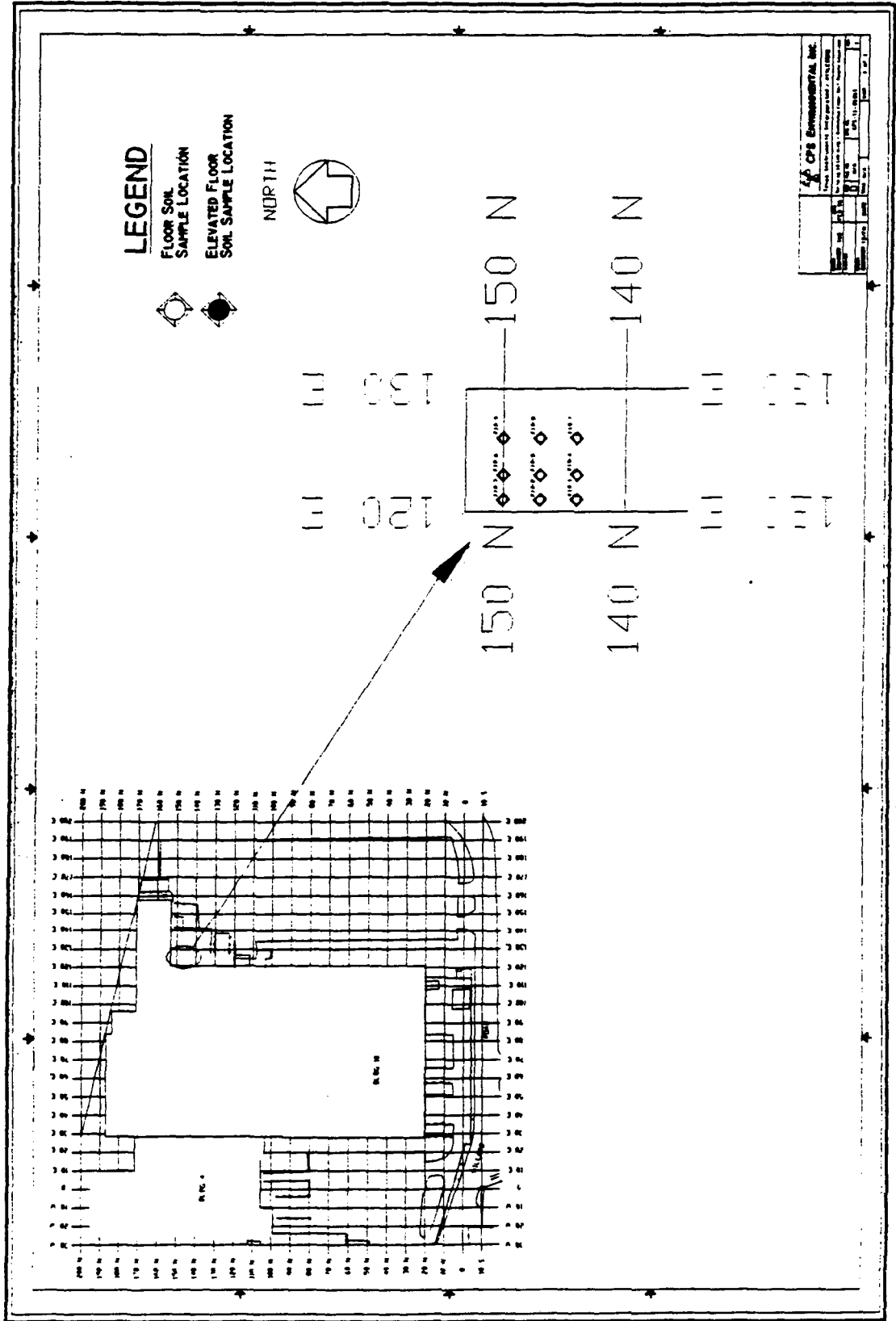
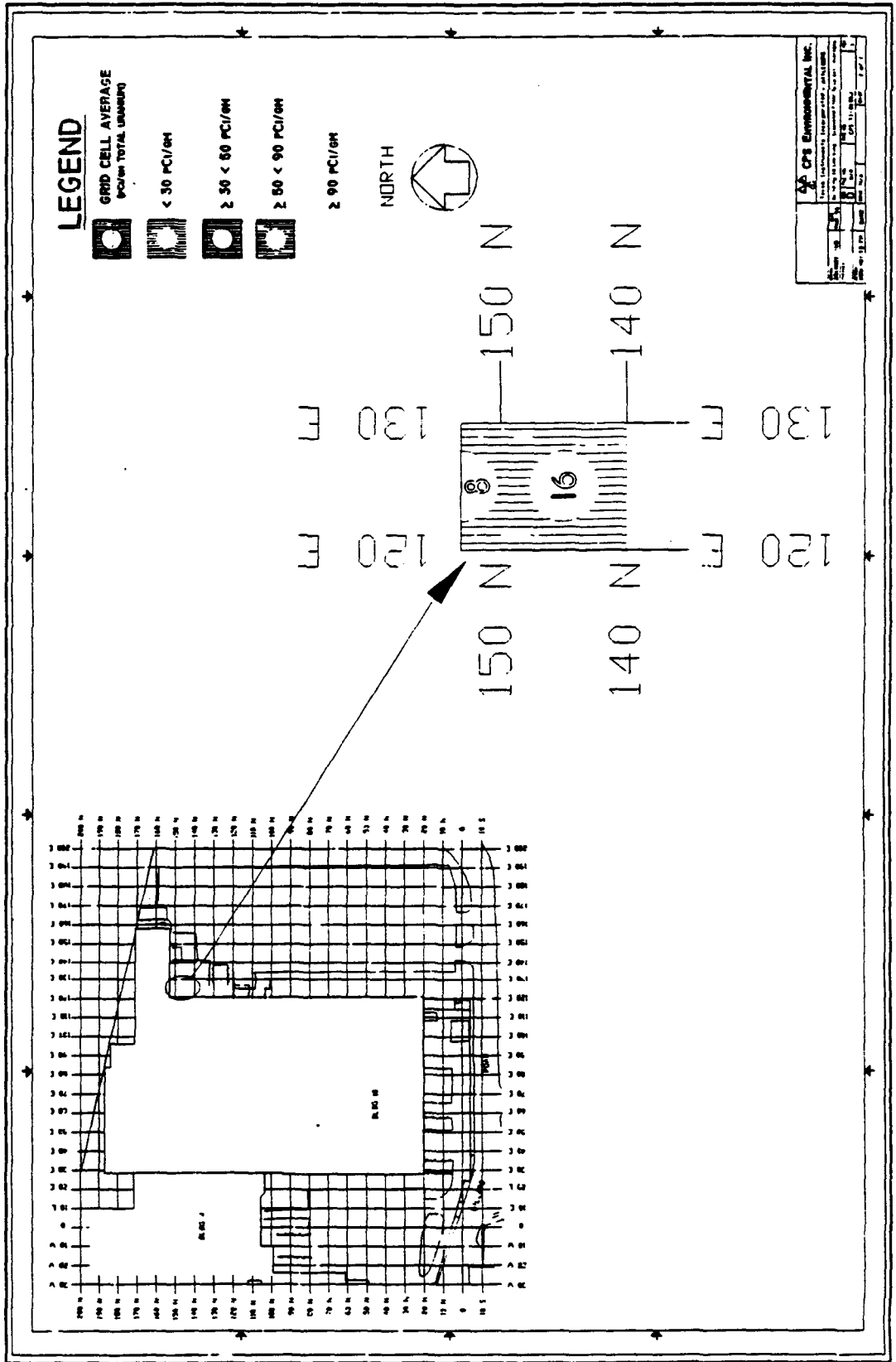


Figure 2
Building 10 Laboratory Wing : Excavation Floor Grid Cell Averages



TEXAS INSTRUMENTS INCORPORATED
Attleboro, Massachusetts

Remediation of Building 12 Thermal Ice Storage Area

NRC License/Docket No: SNM-23/70-33

Final Report

Version 1.0

Prepared by

CPS Environmental, Inc.
June 1996

Remediation of Building 12 Thermal Ice Storage Area

Description

This report describes the remediation activities of an area described as the thermal ice storage area of Building 12 at the Texas Instruments Incorporated Attleboro Site under USNRC License number SNM-23. The principal contaminate identified at this site was uranium from the former fuel fabrication activities at this site. The decommissioning criteria as established within the site remediation plan is 30 pCi/g total uranium. The Building 12 Area is described in detail within the documents entitled "Supplement to the 1992 Remediation Plan" and "Radiological Surveys of Open Land Areas." (Ref. 1,2)

Characterization

Radiological surveys conducted within this area include walk over scans, static measurements, and sub surface soil samples. The subsurface soil samples identified an area of contamination of approximately 200 m² extending in depth to approximately 6 feet. This area is located at the grid coordinates 160-170 N x 180- 200 E as defined on reference map CPS-TI-0103H and CPS-TI-0103C. The subsurface contamination identified at this location had a maximum value of 126 pCi/g (2-4' depth) with Grid Cell Averages of 46 pCi/g total uranium (160 - 170 N x 180 - 190 E) and 72 pCi/g total uranium (160 - 170 N x 190 - 200 E). The results of these radiological surveys are presented in detail within the report entitled "Radiological Surveys of Open Land Areas." (Ref. 2)

Excavation

Remediation of this area was conducted concurrently with the remediation activities of the "Metals Recovery Area". (Ref. 3) The methodology used in the performance of remediation activities was in accordance with the requirements put forth in the "Supplement to the 1992 Remediation Plan". Total volume excavated was 365 m³ (12,890 ft³) (Ref. 4) and was dispositioned along with material from the metals recovery area.

Final Status Survey

Final Status surveys were conducted in the manner specified within the "Supplement to the 1992 Remediation Plan", and included surface soil samples from the floor of the excavation, walk over scans of the floor of excavation, and subsurface soil samples in adjoining grids.

The excavation floor grid cell averages for both grids were found to be less than the 30 pCi/g total uranium criteria. Soil sample results were obtained using the gross alpha counting technique as described within reference 1, 2, and 3. The survey data is presented within the attached tables and figures as follows: Table 1, "Building 12 Thermal Ice Storage Area Excavation Floor Soil Sample Locations and Grid Cell Averages"; Figure 1, "Building 12 Thermal Ice Storage Area Excavation Floor Soil Sample Locations", and Figure 2, "Building 12 Thermal Ice Storage Excavation Floor Grid Cell Averages". In addition, "D" size drawings are provided of Figure 1 and 2. as CPS-TI-0103I and CPS-TI-0103J respectively.

References:

1. *Supplement to the 1992 Remediation Plan*, Texas Instruments Incorporated, December 1994.
2. *Radiological Surveys of Open Land Areas*, CPS Environmental Inc., January 1995
3. *Remediation of the Metals Recovery Area*, Final Report, CPS Environmental, Inc., September 1995
4. Communication with E. Otis Dyer to Mark A. Griffon Regarding Excavation Volume Estimates, June 4, 1996.

**Table 1: Building 12 Thermal Ice Storage
Excavation Floor Soil Sample Locations and Grid Cell Averages**

GRID LOCATION	SAMPLE LOCATION	SAMPLE ID	SAMPLE RESULTS	
170Nx180E	162Nx180E	F12-1	2	
	162Nx182E	F12-2	2	
	162Nx184E	F12-3	32	
	162Nx186E	F12-4	16	
	162Nx188E	F12-5	2	
	162Nx190E	F12-6	19	
	164Nx180E	F12-11	2	
	164Nx182E	F12-12	2	
	164Nx184E	F12-13	2	
	164Nx186E	F12-14	2	
	164Nx188E	F12-15	15	
	164Nx190E	F12-16	2	
	166Nx180E	F12-21	37	
	166Nx182E	F12-22	19	
	166Nx184E	F12-23	2	
	166Nx186E	F12-24	18	
	166Nx188E	F12-25	17	
	166Nx190E	F12-26	17	
	168Nx182E	F12-32	18	
	168Nx184E	F12-33	2	
	168Nx186E	F12-34	19	
	168Nx188E	F12-35	16	
	168Nx190E	F12-36	25	
	168Nx190E	F12-37	38	
	170Nx182E	F12-42	17	
	170Nx186E	F12-43	25	
	170Nx190E	F12-44	2	
		<u>AVERAGE</u>	<u>13.7037037</u>	
	170Nx190E	162Nx190E	F12-6	19
		162Nx192E	F12-7	55
		162Nx194E	F12-8	19
		162Nx196E	F12-9	24
		162Nx198E	F12-10	2
		164Nx190E	F12-16	2
		164Nx192E	F12-17	2
		164Nx194E	F12-18	2
		164Nx196E	F12-19	2
		164Nx198E	F12-20	2
		166Nx190E	F12-26	17
		166Nx192E	F12-27	2
		166Nx194E	F12-28	2
		166Nx196E	F12-29	20
		166Nx198E	F12-30	2
		166Nx200E	F12-31	19

**Table 1: Building 12 Thermal Ice Storage
Excavation Floor Soil Sample Locations and Grid Cell Averages**

GRID LOCATION	SAMPLE LOCATION	SAMPLE ID	SAMPLE RESULTS
170Nx190E	168Nx190E	F12-37	38
(cont)	168Nx192E	F12-38	25
	168Nx194E	F12-39	43
	168Nx196E	F12-40	17
	168Nx198E	F12-41	19
	170Nx190E	F12-44	2
	170Nx195E	F12-45	2
		<u>AVERAGE</u>	<u>14.65217391</u>

Figure 1
Building 12 Thermal Ice Storage Area : Excavation Floor Soil Sample Locations

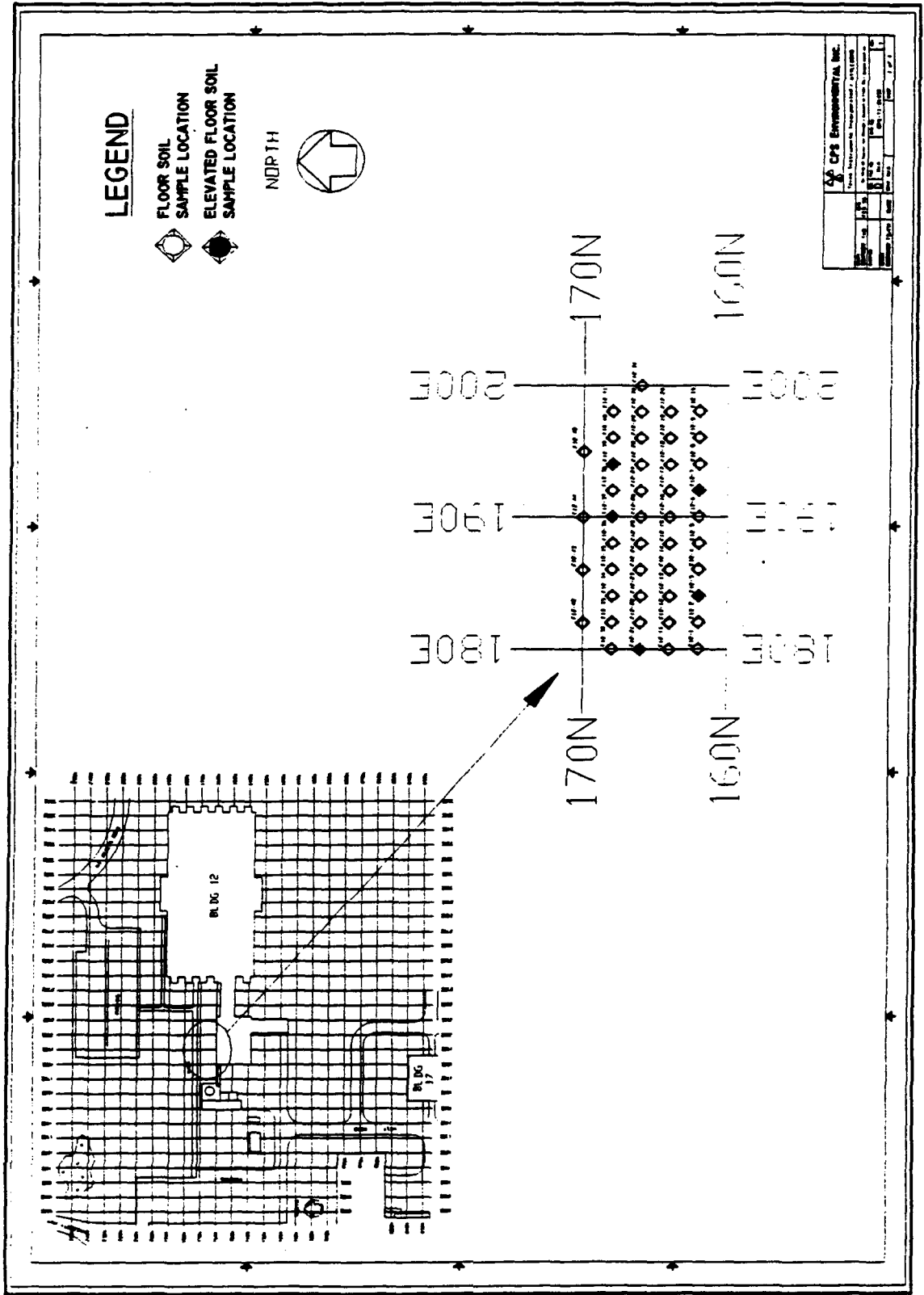
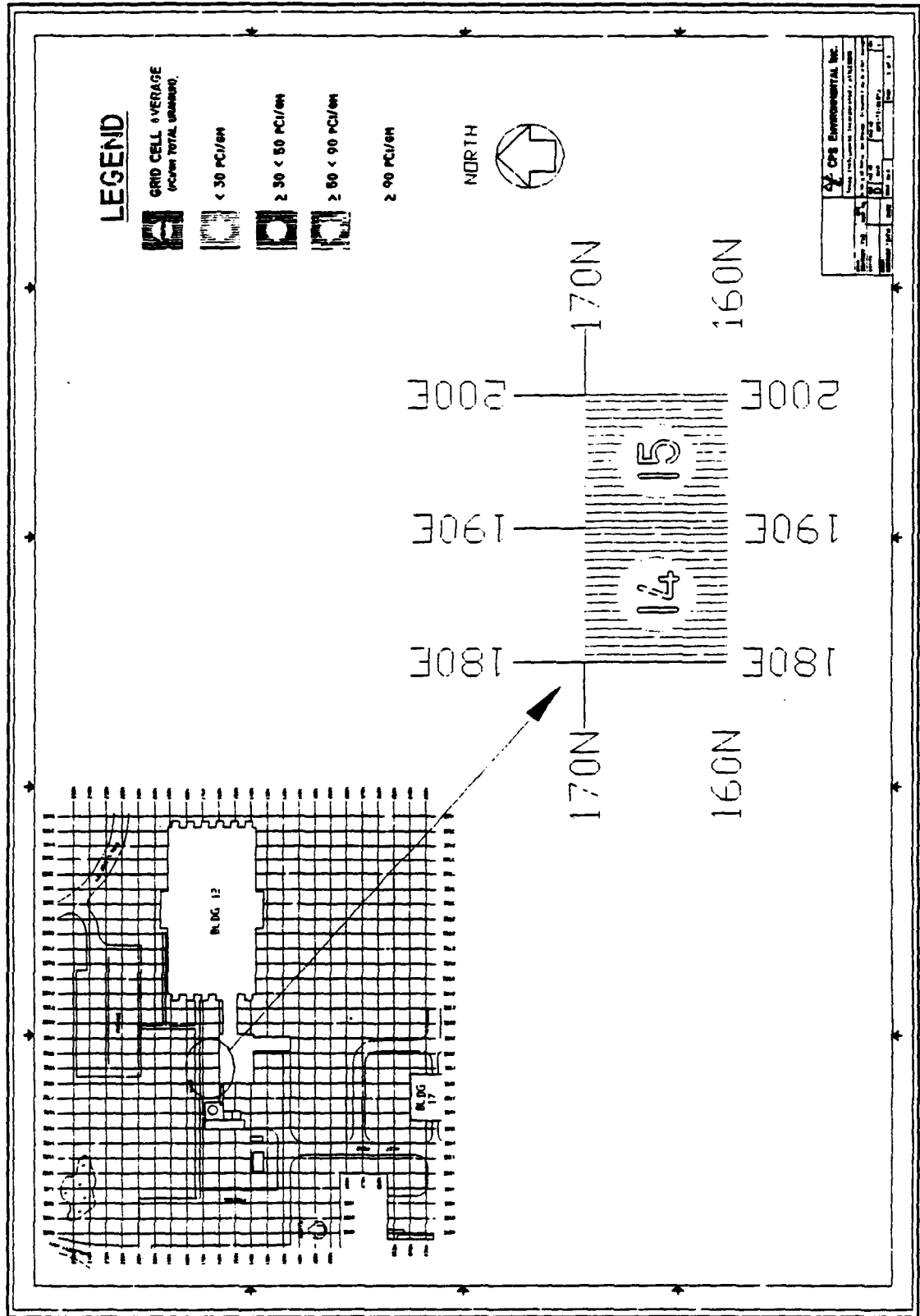


Figure 2
Building 12 Thermal Ice Storage Area : Excavation Floor Grid Cell Averages



TEXAS INSTRUMENTS INCORPORATED
Attleboro, Massachusetts

Remediation of Building 17 Hillside

NRC License/Docket No: SNM-23/70-33

Final Report

Version 1.0

Prepared by

CPS Environmental, Inc.
June 1996

Remediation of Building 17 Hillside

Description

This report describes the remediation activities of an area described as the Hillside of Building 17 at the Texas Instruments Incorporated Attleboro Site under USNRC License number SNM-23. The principal contaminate identified at this site was uranium from the former fuel fabrication activities at this site. The decommissioning criteria as established within the site remediation plan is 30 pCi/g total uranium. The Building 17 Hillside Area is described in detail within the documents entitled "Supplement to the 1992 Remediation Plan" and "Radiological Surveys of Open Land Areas." (Ref. 1,2)

Characterization

Radiological surveys conducted within this area include walk over scans, static measurements, and sub surface soil samples. The subsurface soil samples identified an area of contamination of approximately 200 m² extending in depth to approximately 6 feet. This area is located at the grid coordinates 30 - 50 S x 130 - 160 E as defined on reference map CPS-TI-0108H and CPS-TI-0108A. The subsurface contamination identified at this location had a maximum value of 84 pCi/g total uranium at 45 S x 145 E (0-2' depth). The Grid Cell Averages within this area were as follows: 175 pCi/g (based on surface soil samples)(30 - 40 S x 130 - 140 E); 36 pCi/g (40 - 50 S x 140 - 150 E); 28 pCi/g (30 - 40 S x 140 - 150 E); and 26 pCi/g (40 - 50 S x 150 - 160 E). The results of these radiological surveys are presented in detail within the report entitled "Radiological Surveys of Open Land Areas." (Ref. 2)

Excavation

Remediation of this area was conducted concurrently with the remediation activities of the "Metals Recovery Area". (Ref. 3) The methodology used in the performance of remediation activities was in accordance with the requirements put forth in the "Supplement to the 1992 Remediation Plan". Total volume excavated was 141.4 m³ (4995 ft³) (Ref. 4) and was dispositioned along with material from the metals recovery area.

Final Status Survey

Final Status surveys were conducted in the manner specified within the "Supplement to the 1992 Remediation Plan", and included surface soil samples from the floor of the excavation, walk over scans of the floor of excavation, and subsurface soil samples in adjoining grids.

The excavation floor grid cell averages for all four grids were found to be less than the 30 pCi/g total uranium criteria. Soil sample results were obtained using the gross alpha counting technique as described within reference 1, 2, and 3. The survey data is presented within the attached tables and figures as follows: Table 1, "Building 17 Hillside Excavation Floor Soil Sample Locations and Grid Cell Averages"; Figure 1, "Building 17 Hillside Excavation Floor Soil Sample Locations", and Figure 2, "Building 17 Hillside Excavation Floor Grid Cell Averages". In addition, "D" size drawings are provided of Figure 1 and 2. as CPS-TI-0108I and CPS-TI-0108J respectively.

References:

1. *Supplement to the 1992 Remediation Plan*, Texas Instruments Incorporated, December 1994.
2. *Radiological Surveys of Open Land Areas*, CPS Environmental Inc., January 1995
3. *Remediation of the Metals Recovery Area*, Final Report, CPS Environmental, Inc., September 1995
4. Communication with E. Otis Dyer to Mark A. Griffon Regarding Excavation Volume Estimates, June 4, 1996.

**Table 1: Building 17 Hillside
Excavation Floor Soil Sample Locations and Grid Cell Averages**

GRID LOCATION	SAMPLE LOCATION	SAMPLE ID	SAMPLE RESULTS
30Sx130E	30Sx140E	F17-1	16
	30Sx137E	F17-2	2
	30Sx133E	F17-3	2
	30Sx131E	F17-4	2
	34Sx140E	F17-5	2
	34Sx137E	F17-6	2
	34Sx133E	F17-7	15
	34Sx131E	F17-8	20
	38Sx140E	F17-9	2
	38Sx137E	F17-10	27
	38Sx133E	F17-11	2
	38Sx131E	F17-12	22
		<u>AVERAGE</u>	<u>9.5</u>
30Sx140E	30Sx140E	F17-1	16
	34Sx140E	F17-5	2
	38Sx140E	F17-9	2
	30Sx142E	F17-13	15
	30Sx145E	F17-14	2
	30Sx148E	F17-15	2
	34Sx142E	F17-16	2
	34Sx145E	F17-17	2
	34Sx148E	F17-18	2
	38Sx142E	F17-19	20
	38Sx145E	F17-20	18
	38Sx148E	F17-21	2
	<u>AVERAGE</u>	<u>7.083333333</u>	
40Sx140E	42Sx140E	F17-34	2
	42Sx143E	F17-35	17
	42Sx147E	F17-36	17
	44Sx140E	F17-37	2
	44Sx143E	F17-38	2
	44Sx147E	F17-39	33
	46Sx140E	F17-40	23
	46Sx143E	F17-41	32
	46Sx147E	F17-42	2
	48Sx140E	F17-43	29
	48Sx143E	F17-44	32
	48Sx147E	F17-45	26
	50Sx140E	F17-46	33
	50Sx143E	F17-47	2
	50Sx150E	F17-48	18
	<u>AVERAGE</u>	<u>18</u>	

**Table 1: Building 17 Hillside
Excavation Floor Soil Sample Locations and Grid Cell Averages**

GRID LOCATION	SAMPLE LOCATION	SAMPLE ID	SAMPLE RESULTS
40Sx150E	42Sx152E	F17-22	2
	44Sx152E	F17-23	2
	46Sx152E	F17-24	26
	48Sx152E	F17-25	16
	42Sx155E	F17-26	20
	44Sx155E	F17-27	21
	46Sx155E	F17-28	2
	48Sx155E	F17-29	21
	42Sx158E	F17-30	2
	44Sx158E	F17-31	2
	46Sx158E	F17-32	31
	48Sx158E	F17-33	36
	50Sx150E	F17-48	18
		<u>AVERAGE</u>	<u>15.30769231</u>

Figure 1
Building 17 Hillside : Excavation Floor Soil Sample Locations

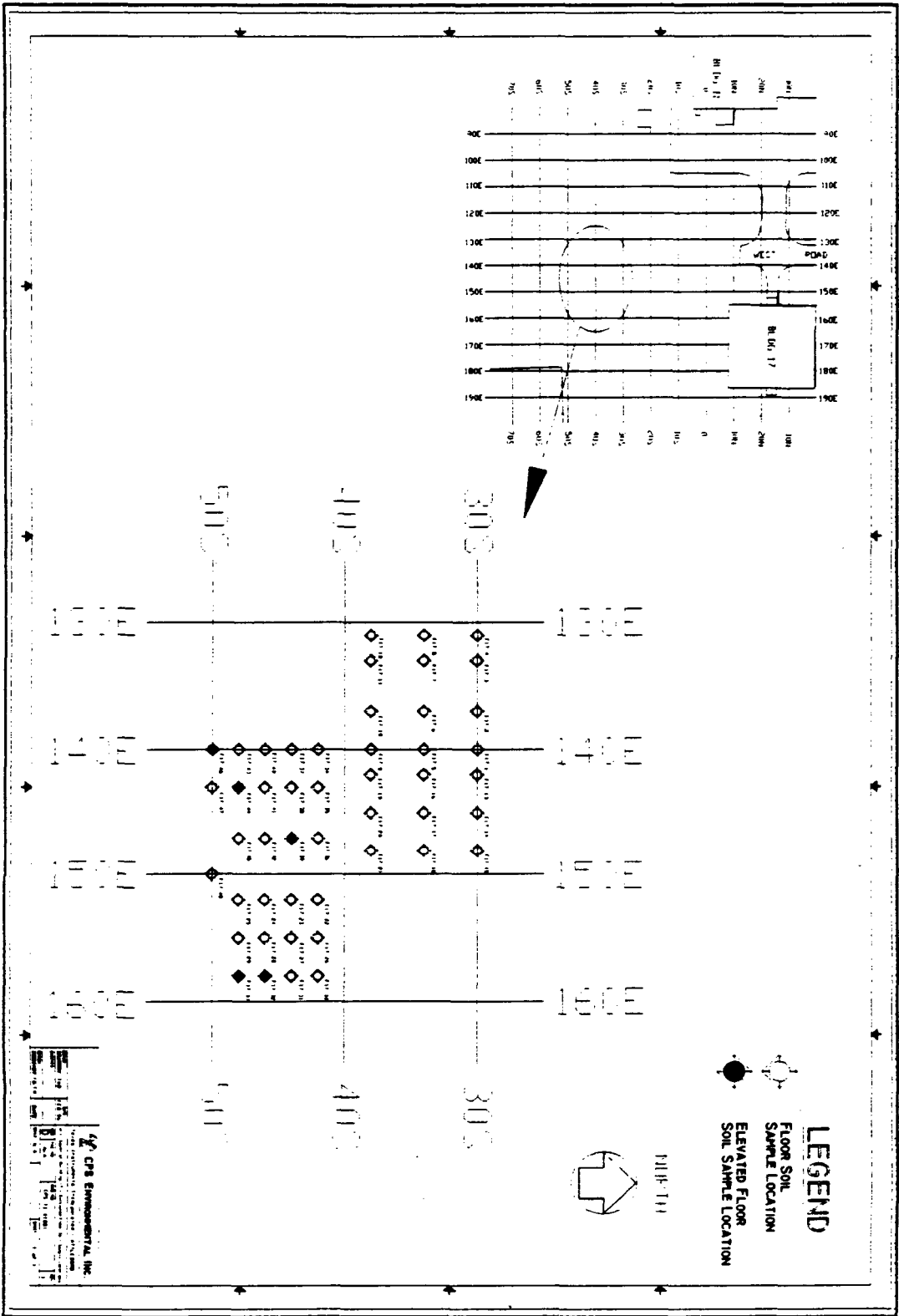
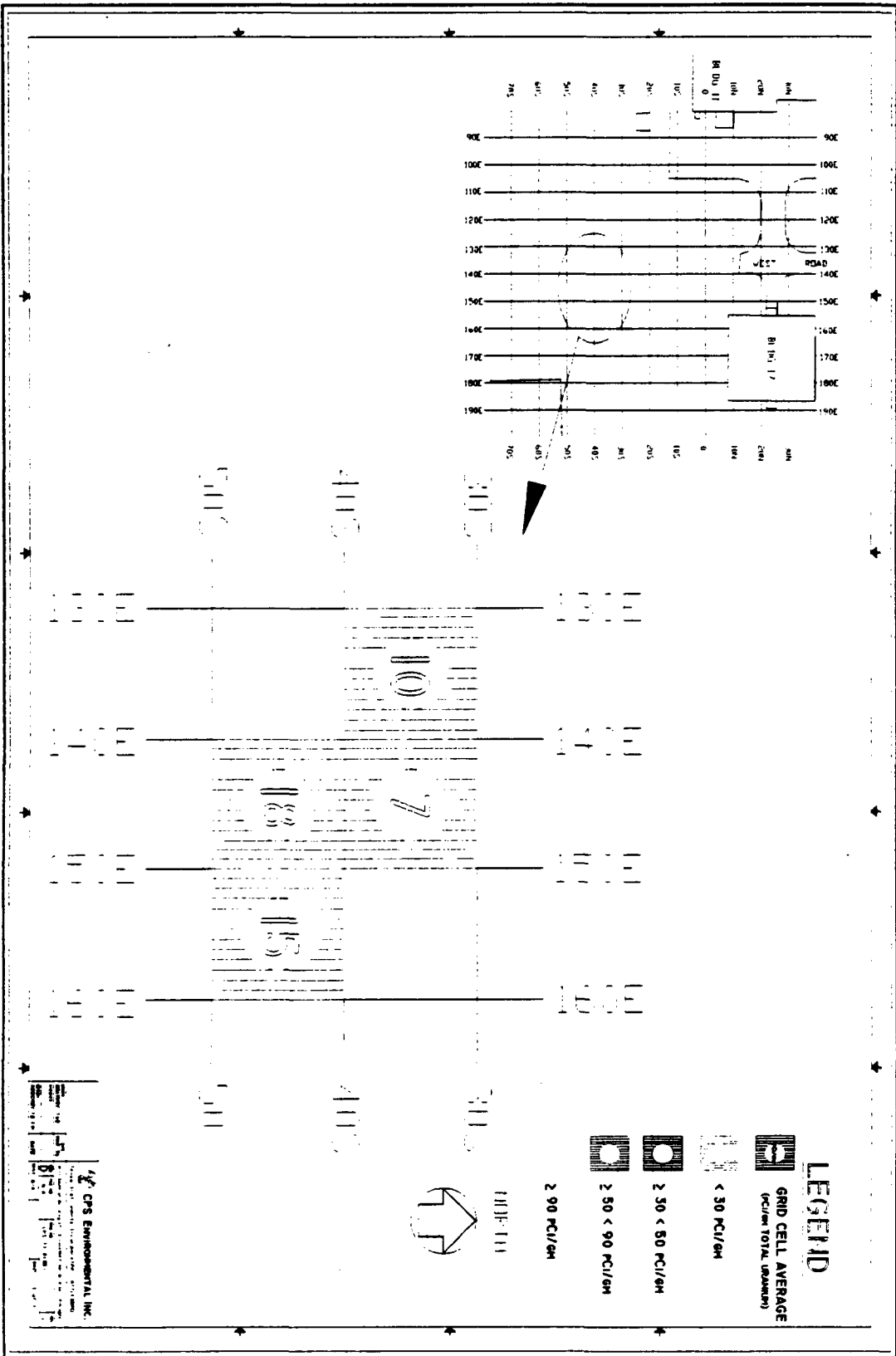


Figure 2
 Building 17 Hillside : Excavation Floor Grid Cell Averages



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**TEXAS INSTRUMENTS INCORPORATED
ATTLEBORO, MA. FACILITY**

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 12 WEST LAWN	0001	200N150E	32	16	16	6.5	Y
	0002	190N160E	35	12	12	2.8	Y
	0003	210N130E	35	17	17	4	Y
	0004	170N140E	37	13	13	9	Y
	0005	160N140E	115	14	14	9.5	Y
BUILDING 12 SOUTH LAWN	0006	120N120E	34	7	7	6	Y
	0007	120N130E	64	2	2	6	Y
	0008	110N130E	57	5	5	4	Y
	0009	110N140E	40	15	15	4.5	Y
	0010	110N150E	51	8	8	4.5	Y
	0011	110N160E	48	10	10	5.7	Y
	0012	110N170E	38	7	7	7.2	Y
	0013	100N130E	82	7	7	5.5	Y
	0014	100N140E	149	10	10	7	Y
	0015	100N150E	123	8	8	7	Y
0016	120N280E	30	19	19	6.5	Y	
0017	120N270E	34	12	12	7	Y	
0018	120N260E	30	18	18	5.5	Y	
0019	110N270E	69	19	19	5.5	Y	
0020	110N260E	50	20	20	5.5	Y	

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

TEXAS INSTRUMENTS INCORPORATED
ATTLEBORO, MA. FACILITY

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 12 SOUTH LAWN	0021	110N250E	39	14	14	4.3	Y
	0022	120N210E	91	17	20	11	Y
	0023	130N210E	40	13	21	10.5	Y
	0024	110N210E	78	17	17	7.5	Y
	0025	120N200E	95	10	30	7.5	Y
	0026	110N200E	54	7	7	6.5	Y
	0027	110N220E	30	14	14	4.5	Y
	0028	100N190E	43	12	12	4	Y
	0029	90N140E	53	12	12	5.5	Y
	0030	90N150E	40	11	11	6	Y
	0031	90N160E	43	13	13	7	Y
	0032	100N160E	113	12	12	6.5	Y
	0033	90N170E	40	14	14	5.5	Y
	0034	100N170E	130	10	10	6.5	Y
	0035	90N130E	43	12	12	5.5	Y
	0036	80N140E	73	16	16	Wall exposed (10.5)	Y
	0037	80N150E	61	6	6	10.5	Y
0038	80N160E	70	14	14	10.5	Y	
0078	130N120E	<30	13	13	5.5	Y	
0079	130N130E	<30	6	6	5	Y	

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

**TEXAS INSTRUMENTS INCORPORATED
ATTLEBORO, MA. FACILITY**

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 12 SOUTH LAWN	0081	70N140E	<30	-	-	Wall exposed (10.5)	Y
	0082	70N150E	16	17	17	Wall exposed (10.5)	Y
	0083	70N160E	12	13	13	Wall exposed (10.5)	Y
	0084	80N170E	25	6	6	Wall exposed (7.5)	Y
BUILDING 11 STOCKADE	0039	80S70E	132	7	7	5	Y
	0040	70S70E	73	10	10	3.5	Y
	0041	60S70E	471	11	11	6	Y
	0042	70S60E	42	14	14	2	Y
	0043	60S60E	105	7	7	8	Y
	0044	50S60E	239	15	15	3	Y
	0045	50S70E	168	7	7	5.5	Y
	0046	40S70E	287	9	9	7.5	Y
	0047	40S60E	179	13	13	3	Y
	0048	50S80E	35	18	18	3.5	Y
0049	40S80E	55	9	9	4.5	Y	
0050	30S70E	50	12	12	3.5	Y	
0051	30S80E	50	9	12	6.3	Y	
0052	30S90E	33	36	46	5.5	N	
0053	20S90E	49	41	47	8	N	
0054	20S80E	421	23	23	11.5	Y	

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

TEXAS INSTRUMENTS INCORPORATED
ATLEBORO, MA. FACILITY

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 11 STOCKADE	0055	20S70E	48	16	16	3	Y
	0056	40S50E	154	19	19	5	Y
	0057	50S50E	97	4	4	4.6	Y
	0058	60S50E	44	13	13	3.5	Y
	0077	30S130E	262	16	17	6.5	Y
	0080	60S80E	23	24	24	Wall exposed (6)	Y
	0085	10S80E	<30	48	30	5.5	Y
	0086	20S120E	<30	17	17	Wall exposed (4.6)	Y
	0087	20S130E	<30	14	14	Wall exposed (6.5)	Y
	0088	20S140E	<30	-	-	Wall exposed (6)	Y
	0089	30S120E	<30	19	19	4.6	Y
	0090	30S140E	<30	8	8	6	Y
	0091	40S120E	<30	21	21	6.5	Y
	0092	40S130E	<30	21	21	6	Y
0093	40S140E	24	22	22	4	Y	
0094	10S90E	<30	34	19	8	Y	
0095	10S70E	<30	-	-	Wall exposed (4)	Y	
0098	50S120E	<30	13	13	5	Y	
0099	50S130E	<30	12	12	4.5	Y	
0100	50S140E	<30	20	20	4	Y	

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

TEXAS INSTRUMENTS INCORPORATED
ATLEBORO, MA. FACILITY

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 11 STOCKADE	0101	50S150E	<30	-	-	Wall exposed (4)	Y
BUILDING 11 RAIL SPUR	0059	80S40E	42	7	7	6.5	Y
	0060	70S40E	299	9	9	6	Y
	0061	60S40E	711	8	8	6	Y
	0062	50S40E	111	7	7	5	Y
	0063	40S40E	58	7	7	4.5	Y
	0064	30S40E	146	9	9	5	Y
	0065	70S30E	823	12	12	6	Y
	0066	60S30E	384	1	11	5	Y
	0067	50S30E	97	6	12	5	Y
	0068	30S30E	31	14	27	4.5	Y
	0069	20S30E	38	16	16	4.5	Y
	0070	80S20E	33	29	29	Test Pits (4)	Y
	0071	60S20E	84	9	9	3	Y
	0072	50S20E	81	5	5	3	Y
0073	30S20E	38	14	14	4.5	Y	
0074	30S10E	44	12	12	4	Y	
0075	20S10E	43	10	10	5	Y	
0076	20S0E	64	15	15	4	Y	
0096	40S30E	<30	4	4	5	Y	

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

TEXAS INSTRUMENTS INCORPORATED
ATTLEBORO, MA. FACILITY

POST REMEDIATION FINAL SOIL CONCENTRATION SURVEY RESULTS

GENERAL SITE LOCATION	GRID#	COORDINATES (NW CORNER)	AVERAGE GRID CONCENTRATION BEFORE REMEDIATION (pci/g) (*)	AVERAGE SAMPLE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	WEIGHTED GRID AVERAGE CONCENTRATION FOLLOWING REMEDIATION (pci/g)	AVERAGE DEPTH OF EXCAVATION (ft.)	MEETS REMEDIATION CRITERIA (Y=YES, N=NO)
BUILDING 11 RAIL SPUR	0097	40S20E	<30	10	10	5	Y
	0102	20S20E	29	13	13	4	Y
	0103	20S40E	<30	30	42	2	N
	0104	70S20E	21	6	6	Wall exposed (6)	Y
	0105	40S10E	23	11	11	Wall exposed (5)	Y

CONCENTRATIONS (pci/g) = TOTAL URANIUM

(*) 1994 SUPPLEMENTAL SURVEY DATA

Westinghouse Electric Corporation

BETTIS ATOMIC POWER LABORATORY

4/16/62

73-Y-291104-M-T

METALS & CONTROLS, INC.
P.O. BOX 898
ATTLEBORO, MASS.

INT. REF.:
WAPD-NAC-(PUR)-105

PERFORM THE DEVELOPMENTAL WORK SPECIFIED IN
ATTACHED PAGES 2 THROUGH 5 OF THIS PURCHASE
ORDER.

THIS ORDER 73-Y-291104-M-T WILL BE CANCELLED
AT NO CHARGE IF AN ORDER IS PLACED WITH SELLER
BASED ON HIS QUOTATIONS FOR INQUIRY JAS-297800.



E 2

Confirming order of 4/16/62

NAB 4/25/62

\$45,545.00
MAXIMUM

ATTLEBORO, MASS.		TRANSP. CHARGES (SEE INST. 2) COLLECT-NET.ALLIND.	CASH TERMS NET 30	ADDRESS CORRESPONDENCE TO (GOVERNMENT) J.A. SPANGLER/ASM					
SHIPPING DATE 60 DAYS A.R.O.		SHIP VIA.		AUTHORIZED BY (PURCHASING AGENT) <i>[Signature]</i> JOS. A. HEEKE, JR.					
OR NAVY CONTRACT NO. AT-11-1-GEN-14		DELIVER TO		VALUE					
ITEM BY & DATE L. JUEL		DEPT. & BUDGET NO. NA.C. CORE CONTRACTOR OPERATIONS 645		CHARGE NO. 19333 (116C67)		COMM. CODE FLNC			
REC. NO.	DATE REC'D.	CARRIER OR CAR NO.	NO. & CONTAINERS	CONFIDENTIAL CARRIER'S		P-PPD C-COLL	RECEIVED		BALANCE DUE
				TION	WEIGHT		NET WT.	QUANTITY	

RECEIVING REPORT
35-C (3-51)

NO RECEIVING DEPT.



[REDACTED]
WESTINGHOUSE ELECTRIC CORPORATION

THIS IS PART OF PURCHASE ORDER 73-Y-291104-M-T

-2-

Metals & Controls, Inc.
P. O. Box 898
Attleboro, Massachusetts

I. SCOPE OF WORK

- A. The purpose of this order is to provide for the performance of development work [REDACTED] applicable to the pending order [REDACTED] Cartridge and Spares, therefore all work performed should conform to requirements of inquiry JAS-Y-297800. All references to fuel or related fuel components contained in this order are to the general design, process and composition of those items [REDACTED] shall be aimed at meeting that design and perfecting that manufacturing process using reference material compositions.
- B. Seller shall perform the following work within 60 days of the date of order placement.
1. Fuel [REDACTED]
 - a. Begin program planning and designing, prepare working drawings, and process flow sheets.
 - b. Design and purchase [REDACTED]
 - c. Modify [REDACTED]
 - d. Procure necessary supplies and modify equipment as necessary to [REDACTED]
 - e. Perform sectioning and tests for evaluation [REDACTED]
 2. Fuel Element Evaluation
 - a. Prepare working drawings
 - b. Prepare process flow sheets
 - c. Design x-ray penetrameters and fixtures.
 - d. Establish conceptual design of ultrasonic scanner.
 - e. Formulate [REDACTED]
 - f. Develop machining tooling.
 - g. Design sircaloy [REDACTED]
- [REDACTED]

3. Subassembly Evaluation

a. Prepare working drawings.

b. Design modifications to [REDACTED]

c. Develop program for establishing [REDACTED]

C. End product of this order to be delivered to Westinghouse is as follows.

1. Twelve copies of a full engineering summary report of all developmental work, results thereof, and 12 copies of all drawings, designs, sketches, specifications and all other technical data of every description.

2. A breakdown of all costs, which is satisfactory to Westinghouse.

II. SPECIFICATIONS AND APPLICABLE DOCUMENTS

A. All references to Inquiry JAS-Y-297800 contained herein refer to the inquiry and amendments as confirmed by Metals and Controls quotation dated March 15, 1962.

B. All documents and specifications applicable to Inquiry JAS-Y-297800 are incorporated herein and made a part of this order except as noted herein. The general provisions are as agreed upon, and confirmed by Seller's letter of March 15, 1962, except for the following alterations:

1. Article 10: Delivery and qualification dates noted therein are not applicable. Seller shall complete the order in 60 days or less.

2. Article 11: Progress payments will not be made.

3. Article 27: Westinghouse will furnish only the material specified in paragraph V of this order to the terms specified in Article 27, Westinghouse will not furnish fuel or poison elements, inconel, [REDACTED]

4. Article 28 is not applicable.

C. Attachments 2 through 8 of Inquiry JAS-Y-297800 are not applicable to this order except as required for development work specified herein.

III. PRICE

A. The maximum price of the order shall be \$45,545.

B. In the event no subsequent order [REDACTED] within 60 days of the date of this order or such extension as is mutually agreed upon, this order shall be terminated and the final order price shall be determined in accordance with Article 16, Termination of the General Provisions. In no event shall the final order price exceed \$45,545.

[REDACTED]

- C. In the event Westinghouse places an order [REDACTED] Seller's quotations and negotiations for Inquiry JAS-Y-297800 within 60 days of the date of this order or such extension as is mutually agreed upon, this order shall be cancelled at no cost to Westinghouse or the Government. All Westinghouse furnished material for this order shall then be considered part of that to be supplied [REDACTED]

IV. DELIVERY

- A. Seller shall complete this order in 60 days.
- B. If this order is cancelled at no cost in accordance with Paragraph III.C the delivery dates of the order [REDACTED] third the term of this order. For example, if this order had proceeded for 2 months, the core order delivery would be shortened not less than [REDACTED] order award, and all dates contained therein concerning material or component deliveries or qualification dates would be shortened by an equivalent amount.

V. STARTING MATERIAL

- A. [REDACTED]
specifications for these materials contained and referenced in Article 27 of the General Provisions, except that if [REDACTED] not placed with Seller as specified elsewhere in this order, all unused Westinghouse furnished material shall be returned to Westinghouse. This material will be supplied within 2 weeks of the date of order placement.
- B. The entire quantities of material to be furnished for this order are contained in the above paragraph V-A. Material quantities specified in the General Provisions for the core order do not apply.
- C. Material furnished or allocated under this order shall be considered as furnished [REDACTED] if such is placed with Seller as noted elsewhere in this order.

VI. SECURITY

- A. Seller should note that the composition of the fuel material that will be processed under this purchase order and the methods used in the fabrication processing of the fuel are classified "Confidential, Restricted Data". Only "I" or "Q" cleared personnel will be permitted to work with, or have access to, the fuel material, fabrication specifications and manufacturing processes supplied by Westinghouse.
- B. The attached classification check list is a guide to classification of this order.
- [REDACTED]

VII. ADDITIONAL INFORMATION

A. Rates governing pricing of this order are as follows and shall be used in the event of termination or non-placement [REDACTED]

1. Manufacturing - \$5.70 per hour
2. Quality Control - \$4.80 per hour
3. Engineering - \$7.90 per hour
4. Direct Expense and Allocable Expense on Labor - 42.6%
5. Direct Expense and Allocable Expense on materials at cost - 16.0%
6. Corporate G&A - 1.3%
7. Profit - None

A CORPORATE DIVISION OF TEXAS INSTRUMENTS INCORPORATED

March 27, 1962

Mr. Joseph Heeke, Jr., Purchasing Agent
 Westinghouse Electric Corp.
 Bettis Plant - Bettis Site
 P. O. Box 1468
 Pittsburgh 30, Pa.



Subject: 60 Day Interim Order

Dear Mr. Heeke:

Last week we discussed by telephone the desirability of performing advance work in anticipation of award to M&C of a contract for fabrication of the [REDACTED]. It was estimated that the signing of a contract might not take place sooner than May 15 or June 1, 1962. The advantage to both parties of minimizing further delay on an already tight delivery schedule is obvious.


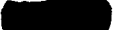
In expectation of this award M&C is presently moving ahead on certain office and plant modifications and also taking steps for acquisition of long lead time items. In addition, it would seem appropriate to initiate evaluation work in the various component phases.

It is estimated that within a 60 day period from receipt of your authorization to proceed, certain key work should be performed which would otherwise be delayed until signing of the contract. The work which we contemplate would include preparation of working drawings and process flow sheets for the engineering evaluation phases of fuel [REDACTED]. The design and procurement of certain tools, fixtures, materials, and supplies associated with the work to be started in these phases would also be initiated. A major portion of the material dollars which would be committed during this 60 day period would [REDACTED] about six weeks time, permitting a relatively limited but nevertheless important amount of work to be performed during the 60 day period.

A brief description of the work to be performed plus material and labor estimates for the work is as follows:

Phase I [REDACTED]	Mat'l. \$	Mfg.	Q.C.	Engr. (Hrs.)
Prepare working drawings	-	-	25	125
Prepare process flow sheets	-	-	125	100
[REDACTED]	8,200	-	100	225
[REDACTED]	1,000	-	-	-
[REDACTED]	750	-	-	-
Supplies	700	-	-	-
Program planning, designing, and preparation	-	150	100	200
	10,650	150	250	650



<u>Phase II - Element Evaluation</u>	<u>Mat'l. \$</u>	<u>Mfg.</u>	<u>Q.C.</u>	<u>Engr. (Hrs.)</u>
Prepare working drawings	-	-	50	180
Prepare process flow sheets	-	-	70	120
X-ray penfaneters and fixtures	100	30	30	250
Ultrasonic scanner development	-	-	40	300
	89,520	-	120	40
	3,000	-	-	-
X Machining tooling. D.E.S. only	1,200	200	-	100
Supplies	1,000	100	50	200
	94,820	330	360	1,190
<u>Phase III - Subassembly Evaluation</u>				
Prepare working drawings	-	-	-	400
 modification & tooling	4,800	-	-	200
Miscellaneous	1,400	320	80	200
	6,200	320	80	800
	10,650	150	250	
TOTALS	<u>111,670</u>	<u>830</u>	<u>690</u>	<u>2,640</u> (Hrs.)

In addition to these expenditures we request that Westinghouse furnish to M&C at 

Extensions of these material and labor estimates are as follows:

Manufacturing	- ¹⁵⁰ 830 hrs. @ \$5.70/hr.	= \$4,730	855
Quality Control	²⁵⁰ 690 hrs. @ \$4.80/hr.	= 3,310	1,200
Engineering	- 2,640 hrs. @ \$7.90/hr.	= 20,800	20,800
		28,840	22,855
D.E. and A.E. on labor (42.6%)		= 12,300	9,750
Materials		= 111,670	10,650
D.E. and A.E. on materials (16.0%)		= 17,900	1,705
Operating Cost		= 170,710	44,960
Corporate G&A (1.3%)		= 2,220	535
TOTAL		<u>= 172,930</u>	<u>45,545</u>

We request that you issue a purchase order to us in the amount of \$172,930 covering this scope of work. At the time of contract award this order would be cancelled at no charge to Westinghouse. Terms and conditions applicable to this order would be those negotiated and agreed upon for Inquiry No. JAS-Y-298700. May we have your order to proceed?

Very truly yours,
M&C NUCLEAR PRODUCTS

George P. Howland
Manager, Navy Nuclear Products

GPH/poc



TO: Naval Core Engineering

BUYER: *[Signature]*

NO. *[Redacted]*

THE SPACES ABOVE AND TO RIGHT OF BOLD LINES TO BE FILLED IN BY PROCESSING SECTION ONLY

SUPPLIER'S NAME				DMS RATING DO-	
SUPPLIER'S ADDRESS				CASH TERMS	COMMODITY CODE
CONFIRMING BY VERBAL LETTER		TO	DATE	ATTACHMENTS:	
F. O. B.		TRANSP. CHARGES	COORDINATOR	<input type="checkbox"/> DRAWINGS <input type="checkbox"/> SPECIFICATIONS <input type="checkbox"/> TERMS AND CONDITIONS <input type="checkbox"/> INSP. REQ'TS.	
SHIPPING DATE	SHIP VIA	BUYER		<input type="checkbox"/> EXEMPT FROM <input type="checkbox"/> SUBJECT TO } FEDERAL EXCISE TAX	

THE SPACES BELOW TO BE FILLED IN BY ENGINEER

ITEM	QUANTITY	DESCRIPTION	ENGINEER'S C/N NO.	UNIT PRICE	TOTAL PRICE
		Please issue a purchase order to provide for the performance of development work <i>[Redacted]</i> applicable to the pending order <i>[Redacted]</i> cartridge and spacers. Terms and conditions of the order should be similar to requirements of Inquiry JAS-Y-297800 and H & C proposal dated March 27, 1962. This development work should consist of the following phases:			
		A. Fuel <i>[Redacted]</i>			
		B. Fuel Element Evaluation			
		C. Subassembly Evaluation			
		The end product of this order is as follows:			
		1. Twelve copies of a full engineering summary report of all developmental work, results thereof, and twelve copies of all drawings, designs, sketches, specifications and all other technical data.			
				TOTAL PRICE	

COST ESTIMATE \$45,545.00	TOTAL WEIGHT	LAST REQ'N NO.	GOVERNMENT INSPECTION REQUIRED AT PLACE OF MFG. <input type="checkbox"/> NAVY INSPECTION - PLACE OF MFG. <input type="checkbox"/> DESTINATION <input type="checkbox"/> THE GENERAL SPECIFICATIONS FOR INSPECTION OF MATERIAL ISSUED BY THE NAVY DEPARTMENT APPLIES TO THIS ORDER. NO NAVY/GOVERNMENT INSPECTION <input checked="" type="checkbox"/> BY <i>[Signature]</i>
DATE REQUIRED 60 Days	C/N COST CEILING	P. O. COST CEILING \$50,000.00	
DELIVER TO Naval Core Engineering (L. B. Prus)	S. O. NO.	CHARGE 419333	SUGGESTED VENDORS
END USE <i>[Redacted]</i>	AEC OR NAVY CONTRACT AT-11-1-GEN-14	DEPT. Naval Core - 612 Contractor Oper	CHEMICAL TEST <input type="checkbox"/> PHYSICAL TEST <input type="checkbox"/> CODE INSPECTION <input type="checkbox"/> INITIAL <i>27</i> (W) INSPECTION - SOURCE <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> NOT REQ'D <input type="checkbox"/> THIS REQUISITION HAS BEEN REVIEWED, & IS UNCLASSIFIED. ANY CLASSIFIED INFORMATION IS INCLUDED AS AN ATTACHMENT. APPROVED: <i>[Signature]</i> DATE:

\$100,000



Westinghouse Electric Corporation

Bettis Atomic Power Laboratory

Box 1468, Pittsburgh 30, Pa.

WAPD-NAC-PUR-81

March 20, 1962

Manager,
Pittsburgh Naval Reactors Office
U. S. Atomic Energy Commission
P. O. Box 1105
Pittsburgh 30, Pennsylvania

Attention: Mr. D. D. Blumenstein

Subject: Proposed Purchase Order 73-Y-297800-MPT
[REDACTED]

Approval is requested for placement of Purchase Order 73-Y-297800-MPT, Attachment #1, [REDACTED] with Metals and Controls Corporation, a subsidiary of Texas Instruments, Inc. Metals and Controls has been selected based on their low competitive bid for Inquiry JAS-Y-297800, and subsequent negotiations. Through these negotiations, Bettis has obtained the price, delivery, and other terms which are most favorable to Westinghouse and the Government for this procurement. Details of proposals, negotiations, and the proposed purchase order are furnished in the following paragraphs, and in the attachments to this letter. The proposed purchase order [REDACTED] and provides for the supply of Westinghouse-furnished Government materials, the value of which is currently estimated to be \$4,571,246. The negotiated delivery is [REDACTED]

In addition to the purchase order price identified above, approval is requested of Options #1 and #2 identified in Article 43 of the General Provisions of the proposed purchase order. Option #1 is priced at \$464,796 and covers the fabrication of a spare closure. A determination will be made within several weeks, and Westinghouse may propose to exercise this option at the time of purchase order award. Option #2 is priced at \$65,282 and provides for die forging of [REDACTED] materials. It is anticipated that a decision to exercise this option will be finalized within several months.

[REDACTED]

[REDACTED]

Proposals were solicited and received from Metals and Controls, Babcock & Wilcox, United Nuclear, and Westinghouse Atomic Fuel Department, hereinafter called M&C, B&W, U&N, and WAFD. These are the only companies qualified for manufacture of the core. Proposals were received on December 13, 1961 at 10:00 a.m., by Mr. H. H. Hoffman of PNRO, Chairman of the Joint Contractor Selection Board. Bid evaluation by the Board, as well as the Board's recommendation for negotiations were approved by Westinghouse and PNRO, and have been followed in negotiations. Attachment #2 summarizes the initial proposals, Joint Contractor Selection Board proceedings, and price and material changes proposed by M&C as a result of negotiations.

Concurrent with proposal preparation by the bidders, Bettis prepared an estimate in terms of labor hours and subcontract and material costs. On the day proposals were received, labor rates and other cost factors such as overhead, G&A and profit percentages were supplied by your office and factored into the Bettis estimate to give what was presumed to be an accurate representation of the cost to manufacture the core package in any one of the core contractor plants. The resultant estimate was about \$2,500,000 lower than the low bidder's proposal. Initial negotiations demonstrated that the Bettis estimate understated development factors, stringent requirements of new specifications, problems associated with novel designs and new fabrication techniques, the cost of inconel raw materials, and the cost of structural fabrication through subcontractors. Consequently, Bettis re-evaluated and revised [REDACTED]. These revisions are explained in detail in Part B of Attachment 5, and the final Bettis estimate [REDACTED] is contained in Part C of Attachment 5.

The Joint Contractor Selection Board recommended simultaneous negotiations with M&C and WAFD, the second low bidder, and Bettis was already negotiating [REDACTED]. M&C immediately proposed a price based on combined award [REDACTED]. As a result, combined award proposals were solicited and received from B&W and WAFD. M&C's combined award price was the lowest proposed, but was not considered sufficiently low to warrant the risks associated with awarding both development cores to one supplier. For this reason, Bettis discontinued combined award negotiations. Details of this negotiation are contained in Attachment 3.

Initial negotiations with WAFD, in accordance with the Board's recommendations, were directed toward their lack of responsiveness to technical requirements of the inquiry in addition to overall price reduction. Protracted negotiations concerning technical qualifications, assumptions and exceptions resulted in a suspension of negotiations pending careful review by WAFD and submittal of a more responsive technical proposal. During this period, the first and second revisions to the inquiry were released to WAFD as well as M&C. When the revised inquiry proposal due dates were approaching, WAFD advised they would be unable to reply to the inquiry revisions in a reasonable time. In view of this and the fact that negotiations were proceeding satisfactorily with M&C, Bettis discontinued negotiations with WAFD.

Even though M&C submitted the lowest cost proposal in response to the inquiry, the disparity between the original Bettis estimate and M&C's bid required intense price negotiation. Reductions were obtained through: removal of costs for unnecessary work; redesign of components; substitution of materials; identification of excess structural costs; continued insistence that the overall price was excessive; furnished material decreases associated with some of the above; and insistence that proposed material requirements could be reduced. After extensive negotiations on a firm price basis at which time Westinghouse was unable to arrive at an acceptable price, M&C was requested to consider a redeterminable contract.

Westinghouse proposed redetermination downward only and a maximum order price which reflected price changes due to changes in scope as well as the \$465,000 reduction negotiated by Westinghouse. The Westinghouse proposal included a sliding scale profit allowance and did not permit profit allowance adjustment on changes issued after order placement. M&C strongly objected to redetermination downward only, profit allowances proposed by Westinghouse, elimination of profit adjustments on proposed change notices, and use of AEC Procurement Regulations to determine allowability of costs incurred. At the insistence of Westinghouse, M&C agreed to further consider redetermination. Negotiations took place over several weeks and were culminated at a meeting with management representatives of M&C, and the Manager of Government Contract Services with Texas Instruments, Inc. As a result of this meeting, Westinghouse and M&C reached general agreement as to profit allowances, consideration of profit on change notices, and cost principles to be applied. M&C counterproposed a price ceiling \$465,000 higher than that proposed by Westinghouse which negated prior negotiated reductions. This was unacceptable and Westinghouse elected to further pursue fixed price negotiations. These negotiations resulted in an additional fixed price reduction of \$235,000 which established the proposed purchase order price. The proposed fixed price is \$700,000 lower than the redeterminable ceiling counterproposed by M&C.

A detailed review of all negotiations and justification for changes in the M&C proposal are outlined in Parts A and C of Attachment 5.

Technical exceptions, assumptions and clarifications as proposed by M&C have been resolved satisfactorily and are recorded in Attachment 6. M&C's final proposal specified that the resolutions were to be incorporated into any order resulting from their proposal. Exceptions which have been resolved by specific changes to drawings or specifications have been incorporated in Attachment 9 of the proposed purchase order. The balance of the items will be incorporated into a Process Approval Request which will be approved coincident with issuance of the purchase order. M&C has orally concurred with this.

Exceptions to General Provisions and other terms of the inquiry as identified by the M&C proposals, have been resolved and recorded in Attachment 6. The most significant changes from the original inquiry provisions were in the areas of price adjustment for late delivery of Westinghouse-furnished Government materials or manufacturing releases, financial responsibility for special

nuclear materials, and Seller's responsibility for Westinghouse-furnished Government materials.

The inquiry stipulated that no price increase would be authorized for late delivery of Westinghouse-furnished Government materials or manufacturing releases. MEC's proposal requested an equitable adjustment in the contract price in the event of such delays. The final resolution of this exception specifies that no price adjustment will be allowed for the first three months after order placement and an equitable adjustment will be allowed thereafter, but shall be limited to unabsorbed overhead costs. In addition, it has been agreed that if Westinghouse provides 15 days notice of such delays, no price adjustment will be requested for the first 15 days beyond the scheduled release date. Westinghouse considers these terms acceptable.

With regard to financial responsibility for special nuclear materials, MEC took exception to the unlimited time allowed for Westinghouse or the Commission to identify discrepancies in the amount of special nuclear material shipped by MEC. In addition, they took exception to the right of the Commission to process these materials without resolution of disagreement as to the quantity of special nuclear material involved. This was resolved by MEC's acceptance of financial responsibility terms which Westinghouse and FEO have recently developed, and is therefore considered acceptable.

The inquiry terms specified that the Seller would be completely responsible for defects in Westinghouse-furnished Government materials, with the exception of tools and equipment and fabricated components, after final acceptance by MEC. The inquiry provisions allowed MEC 30 days to inspect and accept or reject the materials furnished. MEC took exception to assumption of responsibility for these materials at any time including the warranty period after delivery of the core. MEC has withdrawn this exception on [redacted] materials. Westinghouse has agreed to replace core structural material, [redacted] containing latent defects at any time up to the point of core acceptance. Westinghouse has also agreed to replace Westinghouse-furnished defective fuel and [redacted] by Westinghouse, provided such defects are not attributable to Seller's processing. In addition, MEC has accepted warranty responsibility on all materials after final acceptance of the core and spares by Westinghouse. In view of the developmental nature of this core, these terms are acceptable to Westinghouse.

All changes to the General Provisions have been reviewed and concurred with by the Basic Contracts Section.

MEC originally proposed to deliver the core and spares [redacted] of an order. As a result of negotiations, MEC's final proposal specifies delivery of the core and spares [redacted]

As a result of the large dollar value associated with the proposed purchase order price and the value of Westinghouse-furnished Government material, Westinghouse requested MEC to have Texas Instrument, Inc., their Parent Company, as Guarantor for the proposed purchase order. Negotiations were successful in this regard, and a "Guarantor" clause has been added to the General Provisions.

[redacted]

All correspondence pertinent to these negotiations has been itemized in Attachment 4, and a copy of each document referenced therein has been provided to your office.

It has been recommended that the Government conduct an advisory audit of both the original and final M&C proposals. Westinghouse feels that such an audit is desirable since the proposed purchase order is for the procurement of a developmental core which utilizes new design concepts and materials. Such an audit is further justified in view of the dollar value involved, and the projected length of time for performing the scope of work. The results of the audit can confirm the validity of the price and cost analysis used by Westinghouse and the change notice pricing formula proposed by M&C. Arrangements have been coordinated between your office and M&C for conduct of this audit.

Funds for the proposed procurement are available under 116c67 and 117c67.

In view of the above presentation, as well as all attachments noted herein, Westinghouse considers the proposed purchase order to be in the best interest of the Government, and as representing the lowest overall costs that could be achieved through competitive bidding and subsequent negotiations.

M&C's final proposal expires on April 14, 1962. In the event you are unable to respond to the Westinghouse recommendation by such time, M&C will be requested to extend their proposal accordingly.

Very truly yours,

Original signed by

Joe. A. Heeke, Jr., Purchasing Agent
Naval Cores Department

APPROVED BY:

Original signed by

Philip N. Ross,
Vice President & General Manager

/sb

COMMENTS OF U. S. ATOMIC ENERGY COMMISSION

Authorized Representative

Date

[REDACTED]

Distribution: Mr. P. H. Ross
Mr. K. W. Schwenk
Mr. E. T. Cox
Mr. P. F. Dundon
Mr. L. B. Prus
Mr. F. W. Bassett

Attachments:

- #1 - Purchase Order 73-X-297800-MPT and Attachments
- #2 - Summary of WAC's Price and Material Proposal
- #3 - Combined Awards Negotiation
- #4 - Chronology of Negotiations
- #5 - Purchase Order Analysis
- #6 - Resolution of Exceptions

WAPD-MAC-PUR-81-A

April 5, 1962

Manager,
Pittsburgh Naval Reactors Office
U. S. Atomic Energy Commission
P. O. Box 1105
Pittsburgh 30, Pennsylvania

Attention: Mr. D. D. Blumstein

Subject: Proposed Purchase Order 73-Y-297800-NPT
for ALW Core 3

Dear Sir:


WAPD-MAC-PUR-81 transmitted the proposed purchase order [REDACTED] and requested your approval for placement of the order. That package included the allocation of zirconium sponge at \$7.65 per pound. Since the zirconium to be allocated will be National Distillers and Chemical Corporation chunklets at \$5.436 per pound, Westinghouse has renegotiated this area. The cost of the order is altered as follows:



[REDACTED]

M&C had originally proposed allocation of 61,000 pounds of sponge at \$7.65 per pound for \$510,000. When Westinghouse found that National Distillers chunklets were to be allocated, M&C was requested to revise their proposal accordingly. Westinghouse presumed the proposal would be decreased by the difference between 7.65 and 5.436 times 61,000 pounds which is \$135,054. The reduction M&C quoted was less than this on the basis that they had never intended to use 61,000 pounds, but had requested a larger initial allocation than necessary. In response to Bettis request, M&C then decreased the required allocation to 54,000 pounds for either offer, and quoted a reduction of \$120,000 for the chunklet allocation. The two proposals are equal and have been analyzed as follows:


[REDACTED]

[REDACTED]

	<u>Sponge at</u> <u>\$7.65/lb.</u>	<u>Chunklets at</u> <u>\$5.436/lb.</u>
Cost of Allocation of 54,000 lbs.	\$413,000	\$293,544
Cost of Zircaloy Addition	25,145	24,701
	<u>72,755</u>	<u>72,755</u>
Total Price	\$510,000	\$390,000

The value of the zircaloy addition has been calculated by using the Bettis estimate of 56,500 pounds for required  yield. The vendor is thus required to start with about 59,000 pounds of input material or 5,000 pounds more than the allocation. A price of about \$5.00 per pound for reactor grade zircaloy  reasonable.

The apparent discrepancy of \$6,556 between the previous and new total costs results from reconciliations to the average inventory price. At an allocated price of \$7.65, Westinghouse had presumed a credit of \$1.00 per pound for 61,000 pounds, or a \$61,000 decrease in material value. At an allocated price of \$5.436, Westinghouse presumes a debit of \$1.214 per pound for the corrected total of 54,000 pounds, or a \$65,556 increase in total material value. The change from 61,000 pounds to 54,000 pounds falsely implies a price increase.

In order to accommodate the change, portions of WAFD-NAC-PUR-81 have been revised, and pages are attached for replacement in various attachments. Westinghouse has also inserted a delivery date for the cover plate in attachment 9 of the order. Westinghouse has made a minor correction in Article 39 of the General Provisions, and the prices for additional 

In addition, at your request, other changes have been made. Article 20 - Re-negotiation, of the General Provisions, has been amended by addition of a paragraph requiring incorporation of the Article's terms into lower-tier subcontracts. Article 33 - Public Release of Information, has been replaced by more recent wording. A minor correction has been made in Article 35 - Rights in Drawings, etc. Article 10 - Warranty, has been amended by the addition of a required date for peripheral seal bar delivery. Attachment 5A, Overall Cost and Price Analysis, has been modified for clarity, but no change has been made in content.

Copies of the pages amended by the foregoing changes are attached for insertion in the previously transmitted attachments.



Your approval is requested for placement of purchase order 73-Y-297800-MPT with Metals and Controls, Inc.

Very truly yours,

Original signed by

Joe. A. Hecke, Jr., Purchasing Agent
Naval Cores Department

APPROVED BY:

Original signed by

Philip N. Ross,
Vice President & General Manager

/sb

COMMENTS OF U. S. ATOMIC ENERGY COMMISSION

Authorized Representative

Date

Distribution: Mr. P. N. Ross
Mr. K. W. Schwankamp
Mr. E. T. Cox
Mr. P. F. Dundon
Mr. L. B. Prus
Mr. F. W. Hassett

Attachments:

Pur Letter - WAPD-NAC-PUR-81, pages 1 and 2 and 5

Attachment 1

Purchase Order - Pages 1, 2 and 3

Purchase Order Attachment 1 - Pages 8, 18, 35, 36, 37, 41, 42,
43 and 44

Purchase Order Attachment 9 - Page 2

Attachments:

Attachment 2

Part C - Page 7

Part D - Page 8

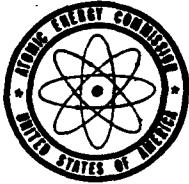
Attachment 5

Part A - Pages 4, 6, 7 and 8

Part B - Pages 1, 5 and 6

Part C - Pages 1 and 6

Part D - Pages 3 and 9



[REDACTED]

UNITED STATES
ATOMIC ENERGY COMMISSION
PITTSBURGH NAVAL REACTORS OPERATIONS OFFICE
P. O. BOX 1105
PITTSBURGH 30, PENNSYLVANIA

IN REPLY REFER TO:

May 15, 1962

P. H. Ross, Vice President
and General Manager
Westinghouse Electric Corporation
Bettis Atomic Power Laboratory
Pittsburgh, Pennsylvania

Subject: PROPOSED PURCHASE ORDER 73-Y-297000-NPT [REDACTED]

Dear Mr. Ross:

Reference is made to letters from your office, WAFD-SAC-FUR-11, dated March 28, 1962, and WAFD-SAC-FUR-21A, dated April 5, 1962, requesting approval to award Purchase Order 73-Y-297000-NPT to Metals & Controls Inc. in the firm price amount of [REDACTED] to letter from your office, WAFD-SAC-FUR-114, dated May 15, 1962, which supplements the two previous FUR letters and requests approval to issue revised Purchase Order 73-Y-297000-NPT and Change Notice No. 1. Change Notice No. 1 changes the order price from the original amount [REDACTED]

The increase of \$307,670 results from inclusion in the order of the spare closure head assembly which was covered by Option No. 1 in the order as initially submitted. Also, minor downward adjustments in the price have been negotiated, and Option No. 2 [REDACTED] has been deleted. Changes from the order as initially submitted are summarized as follows:

- a. The change notice pricing formula has been modified as requested by this office.
 - b. The attachments to the purchase order have been modified to reflect changes to drawings and specifications made subsequent to submission of FUR-11 and FUR-21A for which Bettis has negotiated a price reduction of \$69,106.
- [REDACTED]
- [REDACTED]
- [REDACTED]

- Both options have been deleted as such and the item covered by the first option has been added to the order at a price of \$376,770. This amount reflects a negotiated reduction of \$31,020 from the amount in the option as initially proposed. The requirements covered by the second option has not yet been determined; we understand that this option has been removed from the order because AEC will not agree to the reduced price for the spare head assembly and at the same time agree to the amount which Bettis initially proposed for the second option.

Approval is hereby granted for the issuance of Purchase Order No. 73-1-377,000-APT in the firm price amount [redacted] in your MR-114 and concurrent issuance of Change Notice No. [redacted] increases the order price by \$307,370 [redacted] proposed by your MR-114, subject to the following conditions:

1. Article 30, Small Business and Labor Surplus Area Subcontracting Program, shall be deleted from the order and in lieu thereof the provisions of FPR 1-1.11 (Circular 23) entitled "Small Business Subcontracting Program" and of FPR 1-1.105-3 (Circular 23) entitled "Labor Surplus Area Subcontracting Program" shall be included in the order.
2. In view of the current shortage of funds available for commitment by Westinghouse under Contract No. AT-11-1-GEN-14, the commitment of funds under the order should temporarily be limited to \$5,000,000. This can be accomplished by adding the following language as paragraph 7 to the special provisions and making specific reference thereto in the face sheet:

7. Commitment of Funds

Until such commitment is increased, the maximum legal obligation of Westinghouse with respect to payments due to seller under this order, including any amounts payable under the provisions of Article 11 - Payments and Article 16 - Termination or otherwise, shall be limited to \$5,000,000. Such obligation of Westinghouse shall be increased to the total price of this order at such time as funds are made available by the Commission and obligated under Contract No. AT-11-1-GEN-14 between Westinghouse and the Commission. In any event such obligation of Westinghouse under this order shall be increased on or before October 31, 1962.



[REDACTED]
J. H. Ross

- 3 -

May 15, 1962

Procedures to be followed in the administration of this purchase order were agreed to during a conference between representatives of BAPL and this office and are set forth in the report of that conference dated April 24, 1962.

Very truly yours,

Lawton D. Geiger
Manager

[REDACTED]

REPORT OF CONFERENCE

Date: April 24, 1962

Subject: PNRO APPROVALS TO BE OBTAINED IN CONNECTION WITH BAPL PURCHASE ORDER 73-Y-297900-MPT WITH THE BABCOCK & WILCOX COMPANY FOR THE [REDACTED] AND BAPL PURCHASE ORDER 73-Y-297800-MPT WITH METALS & CONTROLS, INC., [REDACTED]

Persons Present:

PNRO

- R. J. McCormick
- H. H. Hoffman
- D. D. Elumenstein

BAPL

- K. W. Schwaneckamp
- F. W. Hassett
- J. A. Heeke, Jr.
- G. G. Ritter

Purpose:

This conference was held to establish the approvals which BAPL will obtain from PNRO in the administration of BAPL Purchase Order 73-Y-297900-MPT with the Babcock & Wilcox Company for the [REDACTED] and BAPL Purchase Order 73-Y-297800-MPT with Metals & Controls, Inc., [REDACTED]

Approvals to be Obtained:

Agreement was reached during the conference that BAPL would obtain PNRO approval of the following prior to making commitments on agreements with the Babcock & Wilcox Company in connection with BAPL Purchase Order 73-Y-297900-MPT, and with Metals & Controls, Inc., in connection with BAPL Purchase Order 73-Y-297800-MPT.

1. All changes to design drawings, specifications, or standards.
2. All requests for engineering changes (Form NC-5).
3. All Deviation Notices - Disposition Requests (Form NC-6).
4. In addition to the normal requirements of the Bettis Purchasing Manual, any changes, modifications, or additions to Purchase Order 73-Y-297900-MPT or Purchase Order 73-Y-297800-MPT which affects the delivery schedule of the order involved.
5. All subcontractors proposed by the Babcock & Wilcox Company and Metals & Controls, Inc., to perform work under the respective purchase orders.

[REDACTED]

[REDACTED]

[REDACTED]

Other Matters Agreed Upon:

It was also agreed during the conference that BAPL would furnish PNRO with the following information:

1. A copy of the letter issued by BAPL to B&W and M&C implementing the use of the forms to be used in recording technical approvals by BAPL under the purchase order. Such letter is to include the following statement, "Bettis approval of B&W M&C documents does not relieve the vendor of the responsibility of meeting all requirements of the design drawings and specifications."
 2. Three copies of each POIR issued under each order.
 3. Three copies of each change notice immediately upon issuance.
 4. Two copies of each completed DNDR (NC-6) and REC (NC-5).
 5. One copy of those AR (NC-3) covering subcontractor approvals only.
 6. A statement describing the procedures to be followed by BAPL in the review and payment of progress payments. In this connection, BAPL will furnish PNRO information periodically on status of progress and the amounts of payments. This will be provided separately for each order.
- One copy of any interpretation of any design drawing, specification, or standard.

PNRO reserves the right to require additional approvals at a later date if it determines it necessary and desirable. If so required, written notification thereof would be made to BAPL.

This conference report is approved by BAPL and PNRO.



R. W. Schwaneckamp, BAPL



R. S. McCormick, PNRO

April 24, 1962

SUMMARY OF NEC PRICE AND MATERIAL PROPOSAL

- A. Comparison of Initial Proposals
- B. Joint Contractor Selection Board's
- Recommendations
- C. Transition from Original NEC Price
Proposal to Proposed Order Price
- D. Transition from Original NEC Material
Proposal to Final NEC Material Proposal

COMPARISON OF INITIAL PROPOSALS

	<u>Babcock & Wilcox</u>	<u>Metals & Controls</u>	<u>United Nuclear</u>	<u>WAFD</u>
Bid Price for Cores & Spares				
JCSB Adjustments for Items not included in bids				
Adjusted Bid Price				
Value of Bettis-furnished Material				
Total Comparative Quotations				
Delivery				

The above noted amounts are taken directly from the original bids, the recommendations of the Joint Contractor Selection Board, and the original bid abstract form. The Bettis-furnished material values above cannot be directly correlated to those in effect today since changes have been effected to reflect current material cost estimates, application of overhead to Bettis Atomic Power Laboratory labor manufacture, elimination of 15% markup applied to Westinghouse-furnished Government material, addition of non-variable cost items, and several other minor changes. See Parts C and D of this Attachment #2 for transition of NAC's proposal for price and material to final amounts.



Part B
Attachment #2 to
WAFD-NAC-FUR-81

JOINT CONTRACTOR SELECTION BOARD'S RECOMMENDATIONS





Westinghouse

Date: December 20, 1961

From: Bettis Atomic Power Laboratory

Subject: Recommendations of Joint Con-
tractor Selection Board

BETTIS ATOMIC POWER LABORATORY
Bettis Site - 1-N Building

Mr. P. N. Ross,
Vice President & General Manager

Bettis Site - B Building

Mr. L. D. Geiger, Manager
Pittsburgh Naval Reactors Office

cc: Mr. K. W. Schwaneke
Mr. E. T. Cox
Mr. J. A. Heeke, Jr.

In accordance with the Report of Conference dated August 29, 1961, the Joint Con-
tractor Selection Board met on December 13, 14, 15, and 20, 1961, to review the
proposals [REDACTED] Minutes of these meetings and an abstract
of the four bids plus the Bettis estimate are attached for your information.

I. Recommendation

It is the recommendation of this board that negotiations be undertaken with
Metals & Controls, Inc., and Westinghouse Atomic Fuel Department as the apparent
low bidders. The basis for this recommendation is shown in paragraphs II through
IV below and further details of the recommendation are contained in paragraph V.

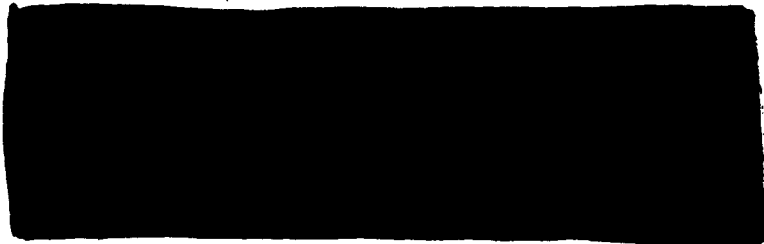
II. Price Analysis

Three of the quotations omitted portions of the inquiry from the total price.
In order to put all quotes on a comparable basis, it was necessary for the
board to make the following assumptions.

- A. Metals & Controls excluded from their quotation, the instrumentation
fabrication and assembly. The board requested and received a separate
estimate from Bettis for the portion of work not included. This esti-
mate was then factored upward by the approximate ratio of the M&C core
quote to the Bettis estimate for the core, increasing the M&C price for
the basic inquiry by \$260,000.



- B. Westinghouse Atomic Fuel Department excepted from their quotation, the instrumentation fabrication and assembly as well as the manifolds. Although WAFD estimated \$2,800,000 for this work for price comparison, the board evaluated the WAFD quotation from another standpoint. The same \$360,000 used with M&C's quote was used for the instrumentation portion not included and an average of the Bettis estimate, Babcock & Wilcox quotation and Metals & Controls quotation was used for the manifolds. This average of \$1,440,000 plus the \$360,000 results in a total of \$1,800,000 to be added to the basic quotation of WAFD.
- C. UNC did not include in its quotation the instrumentation, modification to the core structurals to accept the instrumentation, and most of the core assembly. Adjustments on these three omissions were made as follows: (1) The same \$360,000 figure used in paragraph II.A. above was used for instrumentation (2) Modification to core structurals to accept instrumentation was estimated from the average of the Bettis estimate, and the B&W and M&C quotations, and amounts to \$630,000, and (3) Core assembly price was modified by using the average of the Bettis estimate and the three other quotations for the items not included, and amounts to \$149,000. The sum of these three results in a total of \$1,039,000 to be added to UNC's basic proposal.
- D. Factoring these three adjustments into the total comparative quotation values on page 2 of the abstract results in the following:



- E. With the above adjustment, it can be seen that M&C remains as the apparent low bidder. WAFD is the apparent second low bidder, and would remain in this position even if the \$2,800,000 "estimate" in WAFD's quotation were used in place of the \$1,800,000 adjustment by the Board. The magnitude of the differential between bidders is sufficiently great as to offset possible inaccuracy of the above adjustments.

III. Exceptions

The technical exceptions taken by WAFD are more significant than those of the other three bidders and include exceptions to fuel element, poison element and channel tolerances. Technical exceptions taken by B&W appeared the least significant. A number of exceptions were also taken by all bidders to the inquiry General Provisions. All exceptions taken by all four bidders appear to be negotiable.

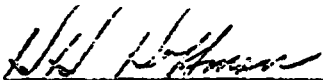
IV. Delivery

None of the bidders quoted on meeting the delivery date specified in the inquiry. The best delivery promise of 9/1/63 was from UMC with a total comparative quotation approximately \$3,000,000 above the apparent low bidder, and approximately \$1,500,000 above the apparent second low bidder. Efforts toward obtaining an earlier delivery should be made during negotiations with MEC and WAFD rather than, at this time, considering payment of premium.

V. Conclusion

The board recommends that negotiations be undertaken with MEC and WAFD, the two apparent low bidders, [REDACTED]. The reasons for recommending negotiations with two bidders rather than only the apparent low bidder are as follows: (1) The apparent low bidders' quoted core deliveries are later than the Bettis required date, (2) their proposals omit the instrumentation and/or other requirements of the inquiry, and (3) their proposed prices result in core costs higher than that estimated by Bettis. Duplicate negotiations should facilitate obtaining more favorable terms on the foregoing. Negotiations with the third low bidder are not recommended at this time because of the apparent \$3,000,000 cost differential as shown in paragraph II.D. above. Negotiations should proceed toward the following objectives:


- A. Obtain price proposals for excluded work.
- B. Establish that Bettis TWX's of 11/27 and 11/28 are included in MEC's quote.
- C. Since all proposals are higher than the Bettis estimate, endeavor to lower the proposals by negotiation of specific areas where they are higher.
- D. Endeavor to improve delivery date.
- E. Negotiate a lower schedule of prices for rejected elements.
- F. Resolve all exceptions.


E. E. Hoffmann, Chairman


G. G. Ritter, Member
Recording Secretary


D. B. Eisenstein, Member


E. B. Hunter, Member


P. H. Gustafson, Member

TRANSITION FROM ORIGINAL M&C PRICE PROPOSAL TO PROPOSED ORDER PRICE

1. Original Bid Price per M&C quotation of December 13, 1961
2. Elimination of sectioning of Westinghouse-furnished elements by M&C per their letter of January 8, 1962
3. Allocation of zirconium sponge [REDACTED] per M&C letter of January 8, 1962
4. Negotiated reduction due to M&C negotiation and anticipated negotiation with their structural suppliers per their letter of February 6, 1962
5. Increase due to incorporation of inquiry revision of January 3, 1962 per M&C letter of February 6, 1962
6. Negotiated reduction per M&C TWX of February 19, 1962
7. Decrease for inquiry revision of January 26, 1962 per M&C TWX of February 19, 1962
8. Negotiated reduction per M&C TWX of March 13, 1962

Total Price

TRANSITION FROM ORIGINAL M&C MATERIAL PROPOSAL TO FINAL M&C MATERIAL PROPOSAL

1. Original amount as extracted from the bid abstract, which listed only supplied material where quantities were dependent on bidder quotations. For further qualification see General Note on Page 2 of this attachment.
 2. [REDACTED] zirconium sponge proposal in their letter of January 8, 1962.
 3. Elimination of sectioning of Westinghouse-furnished elements causing a reduction [REDACTED] letter of February 13, 1962.
- Total value prior to inquiry revisions
4. Value resulting from inquiry revisions per M&C's TMI's of February 20 and 28, 1962 which incorporates all of the foregoing, and in addition, incorporates changes under General Note on Page 2 of this attachment except for removal of 15% markup and the addition of non-variable items which are included below.
 5. Negotiated reduction of [REDACTED] February 28, 1962.
 6. Negotiated reduction of [REDACTED] per M&C TMI of March 6, 1962.
 7. Removal of \$1.00 per gram of U-235 contained in the core and spares, since this material will not be recovered. A recovery allowance of \$1.00 per gram of U-235 is contained in values of all elements and enriched fuel [REDACTED]
 8. Removal of 15% markup previously applied to values of Westinghouse-furnished Government materials.
 9. Addition of incenal at estimated cost which supplied amounts are fixed and not subject to bidder quotations.
 10. Addition of supplied instrumentation components at estimated cost which amounts are fixed and not subject to bidder quotations.
 11. Addition of removable instrumented subassemblies (RIS) at estimated cost, which amounts are fixed and not subject to bidder quotations.
 12. Adjustment to sponge inventory price average since M&C's final proposal provided for purchase at \$5.436 per pound for 54,000 pounds.

COMBINED AWARDS NEGOTIATION

A. Summary and Conclusions

B. B&W Cost Summary [REDACTED]

C. M&C Cost Summary [REDACTED]

D. M&C Cost Summary [REDACTED]

E. [REDACTED]

[REDACTED]

SUMMARY AND CONCLUSIONS

Consideration of award [redacted] one vendor resulted from inception of negotiations with M&C [redacted] with B&W and M&C. During this period, Bettis had stressed the need for price reduction, and negotiations had included detailed analysis of the prices. At the time Bettis opened negotiations [redacted]

Immediately upon notification of the Bettis intent to negotiate [redacted] M&C suggested they submit a proposal for a combined award. Bettis agreed to entertain such a proposal, and requested the same from B&W and WAFD, who [redacted] United Nuclear was not asked to quote since their individual prices were considered to be too high to allow a competitive combined quote. Bids were received on January 2, 1962. M&C's combined award quotation was about \$3,000,000 lower than B&W, whose bid was about \$300,000 lower than WAFD.

Bettis then entered into negotiation with M&C for a combined award, as well as for the individual cores. The disadvantages of the combined award were considered to be (1) delay in delivery of both cores, which individually negotiated deliveries were marginally acceptable at that time; (2) delay in the overall Naval Reactor development program; (3) limitation of vendor competitiveness of bids on the first production reactors of this type; and (4) placement of responsibility for both cores in one vendor's shop, thus increasing the risk of delay due to prolonged technical delays or other unforeseen problems. All of the above were not considered serious enough to prevent placement provided the order cost was sufficiently lower than the total of individual order costs. M&C's initial combined awards proposal which offered a cost savings of approximately \$300,000 was not low enough to justify placement, and a further goal of reductions of \$900,000 was set as that amount required to reach a desirable price. The negotiations culminated with a further reduction of \$275,000 on January 15, 1962. This allowed a cost savings of about \$600,000 over individual awards, which \$600,000 compared to the minimum \$1,000,000 which Bettis considered necessary to justify placement of both cores with M&C. Negotiations were terminated on combined awards at that time.

See Part E of this Attachment 3 for the relative placement summary at that point. Since then, negotiations with M&C [redacted] resulted in significant reductions. The values in Part E are not directly comparable to the present prices. For example, the value of supplied inconel [redacted] on Part E of Attachment 3, while its current value is considered to be \$735,000. Changes in other values, similar to that for inconel, would apply to either a combined award or individual awards. The prices contained in this Attachment 3 are relative to the situation at the time the decision was made to terminate the combined awards negotiation.

SUMMARY AND CONCLUSIONS (continued)

Westinghouse considers the decision to terminate the combined awards negotiation to have been in the best interests of the Government, and that negotiations thereafter, as noted in other portions of this PUR letter and its attachments, substantiate the validity of that decision.

PURCHASE ORDER ANALYSIS

- 5.A. Overall Cost and Price Analysis
- 5.B. Adjustments to Bettis Estimate
- 5.C. Analysis of Changes in Price and Material
- 5.D. Comparison of Audited Change Netice Rates
for M&C with Original Proposal
- 5.E. PNRO Letter on Classification of Labor
Costs at M&C
- 5.F. M&C TWX Confirming Classification of
Labor Costs
- 5.G. Revised Bettis Estimate

OVERALL COST AND PRICE ANALYSIS

As a result of the significant difference between the Bettis estimate and M&C's proposal price for this work, a primary objective of the negotiations was toward reduction of the proposed price. A detailed analysis was made of the M&C proposal as compared with the Bettis estimate to identify specific areas of significant difference and to establish a basis for initial negotiations. This analysis identified apparent inadequacies in the Bettis estimate: substantially more direct labor hours in the M&C proposal, particularly in the areas of quality control and engineering; application of higher material mark-ups by M&C; and a wide variance in the costs associated with in-plant labor as well as purchased materials and services.

A task force was assigned to review the Bettis estimate in detail, and adjustments as discussed in Part B of this attachment were incorporated into the revised Bettis estimate. These changes were subsequently discussed in detail with your office.

In early January, negotiations were initiated with M&C on the basis that their proposal price was unacceptable, and M&C was requested to provide a further breakdown of their price for a more refined comparison with the original Bettis estimate. At the same time, the inquiry revision which clarified and further defined instrumentation requirements, as well as identifying other non-fuel changes, was issued. In addition, M&C's letter of early January proposed several additional areas of cost savings which were directly related to prior negotiations [REDACTED] and represented changes to the anticipated scope of work. Subsequent to review of additional information supplied by M&C, protracted negotiations resulted in M&C's agreement to review their proposal for in-plant labor requirements and to conduct further negotiations with proposed structural subcontractors in an effort to reduce the proposal price. This phase of the negotiations was culminated by M&C's proposal of early February which proposed a price for the aforementioned inquiry revision, and offered a reduction of \$200,000 as a result of their negotiations with structural subcontractors.

A significant difference existed between the M&C quoted labor dollars and the Bettis estimate for the comparable area in spite of general agreement as to the scope of work between M&C and Bettis technical personnel. During negotiations M&C identified direct labor functions that Bettis considered to be in overhead. Bettis tabulated the areas of labor charged direct by M&C but contained as overhead in the Bettis estimate. An estimate of the man hours in these areas and the completed analysis was reviewed with your office to ascertain the accuracy of the listing as it could be verified by audit information in your possession.

Your office advised that, based on your audit data, certain areas were probably incorrectly assumed to be charged direct, notably those under Quality Engineering, Quality Control Data Processing, and Tooling and Equipment Design. See Part E of this attachment.


Bettis contacted M&C and was informed that some of the areas in question had been changed to direct charging after the last FURRO audit, or were currently in the process of being changed, and had been quoted as direct for this proposal. See Part F of this attachment. Bettis then obtained the 1961 audited

change notice rates for M&C from your office and compared them with the quoted rates, since the overhead in the quote should have been lower due to the removal of previously mentioned departments from overhead. As noted in Part D of this attachment,, the quoted overhead rates were found to be substantially lower than the audited rates, and other rates and markups in the M&C proposal were equal to or less than the audited factors.

As a result of the above information, it was concluded that the Bettis estimate did not include a sufficient number of direct labor hours, or that the overhead rate supplied by Bettis may not have been high enough to absorb the activities presumed to be covered by overhead. This was supported by the manner in which the estimate was prepared. Bettis prepared the estimate of labor hours and materials cost prior to the proposal due date. Upon receipt of the proposals, your office assigned labor rates and overhead and markup percentages for use in tabulating the final price estimate.

In accordance with subpart 1-3.808 of the Federal Procurement Regulations, a cost analysis was made by extending the Bettis estimate of direct labor hours, plus those additional direct labor hours which your office confirmed M&C charges direct and Bettis presumed in overhead, by the original M&C quoted labor rates and overhead and markup percentages, the reasonableness of which rates and percentages have been established by the foregoing and the referenced parts of this attachment.

The following are the additional direct labor hours which were formerly assumed to be in overhead.

<u>Labor Category</u>	<u>Man-Hour Estimate</u>
1. MANUFACTURING LABOR	
Materials Handling (Excluding SS Materials Handling)	<u>23,400</u>
2. QUALITY CONTROL LABOR HOURS	
a. Subcontract Field Inspection	12,675
(1) Zircaloy	975
(2) Structural	11,700
b. Receiving Inspection	3,900
c. Chemical Laboratory Analysis	16,575
	
c. Metallography and Physical Testing	9,750
Total	<u>42,900</u>

<u>Labor Category</u>	<u>Man-Hour Estimate</u>
3. ENGINEERING LABOR HOURS	
a. Subcontract Follow	12,675
(1) Zircaloy	975
(2) Structural	5,750
(3) Equipment	3,950
b. Project Engineering	7,800
c. Materials and Metallurgical Development and Follow	3,900
d. Development and Follow of Techniques for CRM Testing	3,900
e. Technician Labor in Support of c. and d. above	7,800
f. Drafting	<u>11,700</u>
Total	<u><u>47,775</u></u>

Examples of cost areas not included in direct labor in the above analysis are Security; Purchasing; Accountability; Criticality, Health and Safety; Works Engineering; Industrial Relations; Clerical; Production Planning; Production Control; Cost Estimating; Sales; Quality Engineering Development; Inspection Equipment Development; Technician hours in support of the previous two; Quality Control Statistical and Record Maintenance; Welding and Equipment Design; and all supervisory personnel.

Listed below is the total labor and material analysis of the revised Bettis estimate combined with the above hours and extended by the original M&C proposal rates:

LARGE AND MATERIAL ANALYSIS

<u>1. LABOR</u>	<u>Manufacturing</u>	<u>Quality Control</u>	<u>Engineering</u>
Bettis Estimated Hours	106,826 hrs.	44,379 hrs.	21,772 hrs.
Additional Direct Labor Hours	23,400 hrs.	42,900 hrs.	47,775 hrs.
Total Comparative Hours	<u>130,226 hrs.</u>	<u>87,279 hrs.</u>	<u>69,547 hrs.</u>
M&C Direct Hourly Rates	x \$5.22	x \$4.21	x \$6.34
Direct Labor Cost	\$679,730	\$367,446	\$482,635
		<u>LABOR</u>	
Total Direct Labor Cost		\$1,529,882	
Direct & Allocable Expense @ 37.2%		<u>569,116</u>	
Operating Cost for Labor		\$2,098,998	

Part A
Attachment #5
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2. MATERIAL (based on Bettis Estimate of Material Cost)

Purchased Materials & Services
Instrumentation
Tooling

Total Material Cost
Direct & Allocable Expense @ 20.1%

Operating Cost for Material

3. LABOR & MATERIAL

Labor (from 1 above)
Material (from 2 above)

Total Operating Cost

Corporate G&A @ 4.03%

Total Costs

Contingency @ 3.9
Profit @ 10% of Price

Subtotal

Sponge Allocation (See Part C of this attachment)

Total Adjusted Price Estimate

By also adding direct labor in the following five areas, which M&C has noted as having been changed to direct charging since your audit (see Part F of the attachment), the adjusted price estimate is increased to a total greater than the proposed order price.

1. QUALITY CONTROL

a. Quality Engineering Development and Follow		17,500
(1) Fuel Material and Elements	3,000	
(2) Fuel Assembly	3,000	
(3) Core Assembly	3,000	
(4) Structural	3,500	
b. Inspection Equipment Development		1,950
c. Technician Hours in Support of 1.a. and b. above		7,800
d. Quality Control Statistical & Record Maintenance		15,600
Total		<u>42,900</u>

2. ENGINEERING

a. Tooling and Equipment Design		<u>5,850</u>
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The following results from the addition of the above hours to the previous analysis.

LABOR AND MATERIAL ANALYSIS

1. LABOR

	<u>Manufacturing</u>	<u>Quality Control</u>	<u>Engineering</u>
Bettis Estimate Hours	106,826 hrs.	44,379 hrs.	21,772 hrs.
Additional Direct Labor Hours	23,400 hrs.	85,800 hrs.	53,625 hrs.
Total Comparative Hours	<u>130,226 hrs.</u>	<u>130,179 hrs.</u>	<u>75,397 hrs.</u>
M&C Direct Hourly Rates	x \$5.22	x \$4.21	x \$5.94
Direct Labor Cost	\$679,780	\$548,054	\$523,255
Total Direct Labor Cost		<u>LABOR</u>	
Total Direct Labor Cost		\$1,751,089	
Direct & Allocable Expense @ 37.2%		<u>651,405</u>	
Operating Cost for Labor		\$2,402,494	

2. MATERIAL (Based on Bettis estimate of Material cost)

Purchased Materials & Services
Instrumentation
Tooling
Total Material Cost
Direct & Allocable Expense @ 20.1%
Operating Cost for Material

3. LABOR & MATERIAL

Labor (from 1 above)
Material (from 2 above)
Total Operating Cost

Corporate G&A @ 4.03%
Total Costs

Contingency @ 3.9%
Profit @ 10% of Price
Sub-Total

Sponge Allocation (See Part C of this attachment)

Total Adjusted Price Estimate



After a careful review of the above analysis, including adjustments to the original Bettis estimate, Bettis concluded that it was reasonable to expect an additional reduction approaching \$500,000. During this period a second inquiry revision, covering the fuel portion of the core, was issued to M&C and the reduction noted above presumed a satisfactory response. Bettis proposed the above reduction to M&C on the basis that their proposal on the inquiry revision would be independent of the reduction and that unresolved exceptions would be resolved to our mutual satisfaction. As a result of these negotiations M&C agreed to a further price reduction of \$265,000 and shortly thereafter submitted their proposal for the second inquiry revision. Further efforts by Bettis to obtain the total reduction of \$500,000 were unsuccessful at this time. Bettis concluded that M&C's revised proposal price was not yet acceptable. Negotiations were initiated in an effort to establish a redeterminable contract based on M&C's revised proposal price as a ceiling. Extended negotiations in this area resulted in substantial agreement with the exception of the price ceiling. M&C's final proposal established a price ceiling \$465,000 higher than their revised firm price proposal, which negated earlier negotiated reductions.

Bettis decided to again pursue negotiations on a fixed price basis and requested M&C to reconsider their position and to agree to the additional \$235,000 reduction previously requested. These negotiations resulted in M&C's agreement to an additional reduction of \$235,000, [redacted]

A summary of all price negotiations is included in Part C of Attachment #2 and price justification for individual price changes is contained in Part C of this Attachment #5.

Subsequent to the negotiations outlined herein M&C submitted a revised proposal which confirmed the negotiated price and incorporated all prior detailed negotiations. The final price breakdown identified labor and overhead rates, and markups applicable for direct and allocable expense as well as corporate burden, which differ from those in their original proposal. In addition the contingency allowance in their original proposal has been eliminated and estimated profit has been reduced significantly. M&C orally advised that the change in rates and markups is directly related to revised



Part A
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WAFD-NAC-PUR-81

forecast data since the time of their original proposal in early December, and that the new rate and markups are being consistently applied on current proposals. M&C also advised the elimination of contingency allowances and reduction in profit has been effected to account for negotiated reductions. Bettis considers such adjustments to be reasonable and that the adjustments do not affect the validity of the above cost and price analysis which utilizes original proposal rates and markups. Substitution of the new rates in the previous analyses results in differences of about one half of one percent in the final totals.

On the basis of the first analysis, there is a difference of only \$159,003 between the adjusted price estimate [REDACTED]

[REDACTED] or less than two and one-half percent of the adjusted price estimate. It should be noted that Bettis has omitted an amount for contingency in the analysis since it is the only area of M&C's quoted rates and percentages which is not equal to, or lower than, the audited rates and percentages. The analysis is on a conservative basis since the direct labor hours added are in only those areas verified by your office as charged direct labor by M&C and the direct labor and overhead rates are significantly lower than those disclosed by your last audit. The second analysis, which includes the changes M&C purports to have made since the audit, indicates the quoted price is less than the adjusted estimate.

Based on the above and information contained in the referenced attachments, Bettis considers the proposed purchase order price fair and reasonable payment for the proposed scope of work.

In addition to the selling price of the order, certain other aspects must be included to establish the reasonableness of the order. M&C's requested amount of Westinghouse furnished material was initially the second lowest of the four bidders, and the final total, after incorporating inquiry revisions and negotiations, is within four tenths of one percent of the revised Bettis estimate. See Part A of Attachment 2 for a comparison of initial proposals received from each of the bidders. Part D of Attachment 2 summarizes the transition from M&C's original proposal for materials to the proposed purchase order quantities, and Section 5, Part C, of Attachment 5 provides a complete and detailed comparison of the estimated Bettis quantities and the proposed purchase order quantities. Based on the foregoing and the referenced attachments, Bettis considers the quantities of material requested by M&C as being fair and reasonable.

Bettis has retained two options to increase the scope of work. They are noted in Article 43 of the General Provisions to the order. They were included in the original inquiry, and the following is a tabulation of the quotes received in comparison to the Bettis estimate:

<u>Item</u>	<u>Bettis Estimate</u>	<u>Babcock & Wilcox</u>	<u>Metals & Controls</u>	<u>United Nuclear</u>	<u>Westinghouse Atomic Fuel</u>
Die Forged Seal Blocks	251,958	No Bid	50,293	No Bid	99,783
Extra Welded Seal Assembly	560,257	582,843	385,865	506,000	220,000

M&C's proposal to the revised inquiry increased their price [REDACTED]. This price is still low, and is less than one-fourth of the Bettis estimate. M&C increased the price for the [REDACTED] in their quotation for the revised inquiry, and Bettis increased its estimate to \$584,845. The M&C price is still the second lowest and is lower than the Bettis estimate by \$120,000. On the basis of the foregoing comparisons, M&C's prices for the two options are considered fair and reasonable should Bettis elect to exercise either or both options.

A change notice pricing formula has been included as Article 42 of the General Provisions to the order. The formula is optional and may be used only if so desired by Westinghouse. It is based on rates which are generally lower than the latest audited rates available to PNERO, and will be changed to any revised rates negotiated by PNERO for use in conjunction with their contracts. Bettis considers this formula as being fair and reasonable.

In the event M&C rejects Westinghouse furnished fuel or poison [REDACTED]

[REDACTED] The prices used for this calculation are contained in Attachment 8 of the purchase order. All four bidders quoted prices for this attachment as a portion of the inquiry. The Bettis estimate was lower than any of the quoted amounts. M&C's prices were about the same as United Nuclear's, but lower than BW's. WAFD quoted separate prices for each type of element, these prices ranging from one-half to five times the other bidders' prices. On a competitive basis, M&C's prices were not unreasonable, but Bettis felt they should be lower in view of the lower Bettis estimate. Negotiations to that end were unsuccessful, and Bettis considered this factor in establishing the total reduction goal for the order price. In consideration that the total reductions were achieved, Bettis considers this portion of the order as acceptable.

In view of the foregoing analysis of all cost areas of the order, Bettis considers the price a fair and reasonable cost to the Government for performance of the work required.

PART B
Attachment #5
to WAFD-NAC-PUR-81

B. ADJUSTMENTS TO BETTIS ESTIMATE

The original Bettis estimate, made at the same time bids were being prepared, and the revised estimate, made for the redesign package, were as follows:

Price of Core and Spares

*Value of Quoted Westinghouse Furnished
Material

The latest estimate is included as Part C of Attachment #5.

1. Price Estimate

The price portion was subsequently revised upwards result of re-evaluation of the estimate and redesign of the components. The chart below shows this in two steps: the first, a re-estimate of the original design; the second, an estimate of the redesigned package on which M&C quoted. Following the chart is an explanation of every change shown on the chart.

Pre Evaluation

Evaluation &
Qualification

Barrels

Core Assembly &
Packaging

Instrumentation

Structurals

Fuel Fabrication

Sponge Allocation

*This is the value of quoted quantities for comparative purposes only. The fully reconciled value of material is noted in Part D of Attachment 2.

Pre-Evaluation Process Development



Evaluation, Qualification and Process Approval

Evaluation, Qualification and Process approval was increased \$258,094 from \$118,967 to \$377,061. In the original estimate a very minimal allowance of \$17,700 had been made for work associated with omega seal welding. The qualification specification, NX-0007, was completed after the original estimate. Addition of the qualification requirements from NX-0007 increased the amount attributable to omega seal work including head area closure, mechanism and circular omega welds, to 3000 manufacturing hours, 1130 engineering hours, 860 quality control hours and \$81,191 of purchased materials and services representing an increase of \$127,600.

The remainder of the increase is \$130,194 and is attributable to fuel and control rod qualification. The original estimate provided for manufacture [redacted] but did not presume any sectioning. Review of the qualification requirements of NR-5 resulted in a change [redacted] with provision for sectioning and evaluation of them.



[redacted] It did not provide for sectioning and evaluation, which was added in the re-estimate for all of the above items.

Barrels

The three barrels (core, support and hold-down) were increased \$372,767 [redacted]. An independent estimate in hours and material was made by engineering, welding, and quality control engineers subsequent to the original Bettis estimate. These persons had no knowledge of the original estimate or the bids. In addition, Bettis management personnel visited one of the subcontract bidder's plants to discuss the problems associated with the work. The revised estimate pointed up several serious shortcomings in the original. The most obvious was inconel priced at \$2.00 per pound, where the best prices Bettis has obtained for quantity purchases of similar sized material have been about \$5.00 per pound. The change to \$5.00 raised the estimate about \$100,000. The re-estimate disclosed that inadequate consideration had been given the standards and fabrication requirements, such as inspections and weld requirements of NAVSHIPS 250-1500. The heavy machining required was also understated. As a check on this re-estimate, Bettis compared the labor dollar estimate with the low labor quotes for the first production [redacted]. The material figure for inconel could not be compared [redacted].



stainless steel, but Bettis experience on procurement of inconel establishes the \$5.00 per pound figure as being reasonable, or perhaps even low in view of the relatively small quantity to be purchased by the barrel fabricator. The labor comparison is as follows:

<u>Item</u>	<u>Labor Costs</u>	<u>Labor Estimate</u>	<u>Comments</u>
Core Barrel	102,100	102,100	[REDACTED]
[REDACTED]	25,500	54,500	Core 3 cross section is more intricate. Core 3 fabrication consists of hogged out ring forging plus welded plate, and includes extensive, intricate machining. Core 2 is fabricated from flat plate and is simple straight machining.
Back-up Ring	195,000	28,000 20,000 55,000 <u>103,000</u>	[REDACTED] Core 2 includes extensive welding and machining, which Core 3 does not.
Support Barrel and Support Ring	114,800	138,600	[REDACTED] Core 3 has 25% more circumferential welds.
Hold Down Barrel Hold Down Ring	102,000	62,000 20,000 <u>82,000</u>	[REDACTED] and requires special internal support for machining.

It is presumed that Core 2 costs were probably high since this was the first production core, but the use of inconel and the fact that Core 3 is a prototype design offsets this. The comparisons are generally favorable in view of the design and size differences in various pieces. The Core 3 labor estimate cannot be wholly verified by this type of comparison, but the comparison serves to substantiate it's reasonableness.

Core Assembly and Packaging

Core Assembly and Packaging was increased \$18,643 [REDACTED]
Review of the estimate by engineering personnel with extensive experience in [REDACTED] disclosed that the original estimate was low in this area, and resulted in the above increase.

Instrumentation

Instrumentation was added at \$300,000. The original estimate contained nothing for instrumentation, as personnel preparing it did not believe sufficient drawing details were available to estimate a price. The \$300,000 is the Bettis estimate of the cost to manufacture the instrumentation components to satisfy core and spare requirements.

Core Structural

Core structural other than barrels were increased \$229,321 [REDACTED]
[REDACTED] This was the result of an increase of \$354,090 from a re-estimate, and a decrease of \$124,769 due to design changes.

The re-estimate was accomplished in the following manner. A task force of manufacturing, welding and quality control engineers made a complete re-evaluation in hours and material dollars. These persons had no knowledge of the original estimate or of the bids. Their estimate was turned in to Bettis management personnel, where hourly rates, averaging about \$12.00, were used to extend the estimate. Wherever there was a discrepancy or a questionable area in comparing it to the original estimate, the persons involved were questioned until the amounts were resolved. The results of the re-estimate, the comparison, and the resolutions showed the original estimate to have been deficient in tooling, engineering, and quality control areas. The original estimate failed to take into account the costs required to design and fixture these complex assemblies for fabrication and welding. Welding joints were completely designed by the task force, and were estimated on the basis of the particular joint requirements. In addition, the original estimate did not adequately consider the work involved in meeting the required standards, such as the radiography and dye penetrant inspections required by NAVEHIPB-250-1500, or allow any cost for assembly of instrumentation components.

The decrease of \$124,769 was a Bettis estimate made after the redesigned structural drawings were sent to MEC, but before MEC had responded. Although there were many changes involved, the major areas of alteration were the following:

[REDACTED]

- 3. Lengthened upper support
- 4. Shortened rod extensions

- 84,000
- + 37,000
- + 23,000
- 10,000

Part B
Attachment #5
WAFD-NAC-FUR-81

1. Change of shroud	/ 63,000
2. Simplification of spider at top of upper manifold	-108,000
<u>Spares</u>	
	- 10,500
	/ 7,000
3. Simplification of spider at top of upper manifold	- 42,000
4. Lengthened upper support	/ 3,000

Fuel Fabrication

Fuel fabrication was increased \$100,997 the result of an increase of \$194,844 from a re-estimate and a decrease of \$93,847 due to design changes.

The increase of \$194,844 was due to two things. First, the original estimate had been completed on a 50% yield basis, when it was decided that a higher yield should be used. The higher yield was mistakenly passed on and incorporated at 64% rather than 61.3%. When corrected, after the estimate had been published, it resulted in

The second factor was that a task force composed of several fuel design engineers, a manufacturing man, and a quality control engineer re-estimated portions of the estimate. They had no knowledge of the estimate or the bids. Their review resulted in increases of 4036 manufacturing hours, 11,276 quality control hours and 3656 engineering hours. It also resulted in a decrease in purchased materials and sub-contracts. It added destructive evaluation, for which no previous allowance had been made; this alone resulted in about 3000 of the 11,276 quality control hours. It was noted that the original estimate had no extra work allowed for instrumented components. Of the hours noted above, 2290 manufacturing and 1660 quality control hours were added for instrumented components. In general, the more thorough review estimated higher hours required to do the job, especially in quality control and engineering.

The decrease of \$93,847 resulted from redesign of elements and a reduction in the total number of elements. The estimate was made during the time MEC was requesting this area, and was completed prior to the time H & C submitted their price for the redesign.

Zirconium Sponge

In the original estimate, a zirconium sponge allocation was not considered. Instead, it was presumed that. Subsequently, MEC proposed a zirconium sponge allocation at a more favorable net cost to the Government, hence, the MEC proposed price of \$390,000 was added to the Bettis estimate.

Part B
Attachment #5
WAPD-NAC-PUR-81

2. Westinghouse-Furnished Government Material

The estimate of Westinghouse-furnished material was not altered except for the redesign for which material quantities were re-estimated prior to the time M&C returned its rebid quantities. Subsequent negotiations ensued with M&C, and the Bettis estimate and M&C required material quantities are now within \$11,300 of each other.

A comparison of the original estimated and quoted amounts and final estimated and quoted amounts are contained in Part C of this Attachment #5.

3. Alternates

The only alternate which increased in the price estimate was Alternate 4, an extra [redacted]. The original Bettis estimate was \$560,257. As a result of the redesign, it increased by \$24,588 to \$584,845.

Analysis of Changes in Price and Materials

1. [REDACTED]

the Bettis estimate of 40 hours for destructive testing, and the M&C proposal rate for quality control labor, Bettis concluded a price reduction of \$26,635 should be offered. In view of the above, M&C's proposed price reduction and proposed reduction in the quantity of Westinghouse-furnished fuel and poison elements is considered acceptable.

2. During negotiations, M&C was requested to submit a proposal based on allocation of zirconium sponge in lieu of Westinghouse-furnished zircaloy ingot. M&C quoted an increase in price of \$390,000 based on an allocation of up to 54,000 pounds of sponge. This proposal was analyzed as outlined below, and is considered favorable to the Government in view of the cost savings involved.

Analysis of Proposal

A. Value of zircaloy [REDACTED]

(1) 60,000 pounds at \$9.50/pound from bid abstract	\$ 570,000.
(2) Less 15% handling charge included in \$9.50/pound price	- 74,348.
(3) Net cost of zircaloy [REDACTED]	495,652.

B. Proposed price increase for sponge allocation

(1) Proposed price increase	\$ 390,000.
(2) Price adjustment of \$1.214/pound based on average inventory price for sponge	+ 65,556.
(3) Net cost of proposal	455,556.

C. Cost savings using sponge allocation

(1) Net cost of zircaloy [REDACTED]	\$ 495,652.
(2) Net cost of proposal	455,556.
(3) Net savings	\$ <u>40,096.</u>

As a result, the proposed purchase order includes an allowance of \$390,000 based on a zircaloy sponge allocation of up to 54,000 pounds.

[REDACTED]

Part C
Attachment #5
WAFD-WAC-FUR-81

3. In response to the initial inquiry revision, M&C quoted [redacted] of the instrumentation requirements and other structural component design changes. Based on the information contained in M&C's letter proposal for this work and additional oral information, a breakdown of this proposal has been compared with a Bettis estimate as follows:

	<u>M&C</u>	<u>Bettis</u>
A. Labor and material for modular instrumentation components and associated hardware	[redacted]	[redacted]
B. All instrumentation components not included in A. above	[redacted]	[redacted]
C. In-plant labor to install instrumentation tubing on subcontracted structural components and installation of all instrumentation components	[redacted]	[redacted]
D. Cost associated with changes to structural components	[redacted]	[redacted]
Total	[redacted]	[redacted]

The Bettis estimate for this change was prepared during the period M&C was preparing their proposal. Items B, C, and D are included in the M&C price and the Bettis estimate, but are all related to instrumentation which is being redesigned by Bettis to effect cost reduction. Item A is not included in the price or price estimate, but is included in the value of Westinghouse furnished material as explained in the succeeding paragraph.

As a result of negotiations with M&C of Item A above, Bettis concluded that the high cost associated with these components was attributable to M&C's inability to obtain firm price proposals from more than one supplier, design drawings provided by Bettis were product type drawings, and in view of the significant amount of welding and fabrication required, the supplier involved did not adequately engineer the design prior to submitting his proposal to M&C. In addition, the Bettis estimate which was developed during the same period M&C was attempting to secure proposals from their subcontractors, identified that the cost associated with these instrumentation components was significantly higher than anticipated. Bettis elected to furnish these components to the supplier, and the current estimate for these materials is [redacted] of this attachment 5. C. as being a part of the value of Westinghouse furnished material. The redesign concept which is under study is still modular in nature and therefore does not affect the labor required to install these components in the Core. As a result of the foregoing, this item has been eliminated from the proposed purchase order price.

The proposed price associated with Item B above is slightly less than the Bettis estimate for these components and is therefore considered reasonable.

The Bettis estimate for Item C above represents labor cost to install all of the instrumentation into the Core including attachment of instrumentation tubing to the fabricated structural components. It does not contain an estimate of costs associated with the engineering or inspection effort required by M&C since these items were [redacted]

previously considered to be in overhead charges. Because of the significant difference between the MEC proposal price and Bettis' estimate for this phase of the work, this difference was taken into consideration prior to establishing the overall price reduction that Bettis felt was justified, and which is discussed in detail in Part A of this attachment. In view of this, and the fact that MEC ultimately accepted the total reduction requested by Bettis, this item is considered acceptable.

The oral breakdown identified by MEC for Item D. above indicated a significant increase in the cost of structural components whereas the Bettis analysis indicated that the changes associated with this inquiry revision should result in a significant decrease. MEC's letter of early February 1962 confirmed their revised proposal, including the \$89,000 increase, but in addition the letter identified a \$200,000 price reduction, associated with their negotiations with structural subcontractors. When MEC was requested to itemize the increases and decreases associated with structural components which resulted in a net increase of \$89,000, it became apparent they had been attempting to negotiate reductions with their proposed subcontractors during the same period the subcontractors were preparing proposals for the revised inquiry. MEC could not breakdown the \$89,000, and confirmed that the previously mentioned \$200,000 reduction and the \$89,000 increase was the difference between the structural cost included in their original proposal and the structural cost based on the revised inquiry. Bettis considers the net reduction of \$111,000 acceptable when compared with the Bettis estimate of \$124,769.

The net result of the foregoing negotiations is a price increase of \$470,982 for incorporation of the first inquiry revision. In view of the above analysis, this total price increase is considered acceptable and has been included in the proposed purchase order price.

4. MEC quoted a price reduction of \$92,000 for the second inquiry revision. The Bettis estimate which was compiled during the period MEC was preparing their proposal is a reduction of \$93,847, and is further explained in Part B of this Attachment #5. The MEC proposal for this revision for this scope of work is considered fair and reasonable.
5. Material quantities are best justified on the basis of comparison of the Bettis estimate with MEC's proposed quantities.

Both of these increases were acceptable to Bettis.

In theory, the difference between the original Bettis quantities and final quantities should be the effect of the second inquiry revision; however, in estimating for the change Bettis discovered its original quantities.

The transition from original quantities to final quantities was in a number of negotiated steps, but since these were reductions, except as noted above, they are not summarized here. See Part D of Attachment 2 for a summary of negotiated reductions.

The comparison of quantities and dollar values is as follows:

MATERIAL DESCRIPTION

BETTIS ESTIMATES
Original Final

M&C PROPOSALS
Original Final

Zircaloy [REDACTED]

Fuel [REDACTED]

1. Enriched
(in wt. of U-235)

2. Natural
[REDACTED]

[REDACTED]
2. Wire

Production Elements

949-D-039, Pc. 1, H1

949-D-039, Pc. 2, H2

949-D-039, Pc. 3, H3

949-D-039, Pc. 5, H8

949-D-039, Pc. 6, H9

950-D-376, H7

950-D-361, H5

952-D-996, H10

1102

MATERIAL DESCRIPTION

BETTIS ESTIMATES
Original Final

M&C PROPOSALS
Original Final

Qualification Elements
949-D-039, Pc. 1, H1

949-D-039, Pc. 2, H2

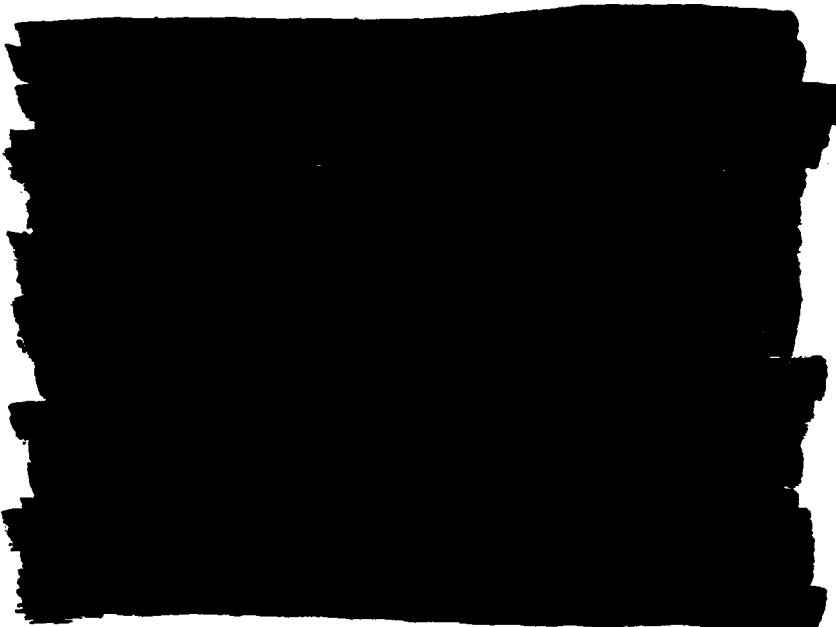
949-D-039, Pc. 3, H3

949-D-039, Pc. 4, H4

950-D-376, H7

950-D-381, H5

TOTAL VALUE



The individual item unit dollar value used for the final estimate and proposal differs from the original unit dollar value as explained in Part A of Attachment #2.

The above lists all items quoted competitively, but does not reconcile total supplied material values. To perform this reconciliation, the following values are added to the final Bettis estimate and the final proposal.

	<u>BETTIS ESTIMATE</u>	<u>M&C PROPOSAL</u>
1. Removal of \$1.00 per gram of U-235 contained in the Core and spares, since this material will not be recovered. A recovery allowance of \$1.00 per gram of U-235 of starting material is contained in values of all elements	[REDACTED]	[REDACTED]
2. Removal of 15% handling charge assigned to all previous values.	[REDACTED]	[REDACTED]
3. Addition of inconel, which supplied amounts are fixed and not subject to bidder proposals.	[REDACTED]	[REDACTED]
4. Addition of supplied instrumentation components, which amounts are fixed and not subject to bidder proposals.	[REDACTED]	[REDACTED]

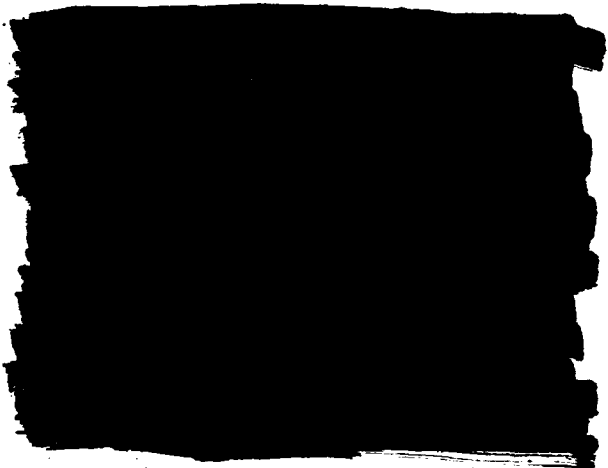
BETTIS ESTIMATE

M&C PROPOSAL

5. Addition of removable instrumented subassemblies which amounts are fixed and not subject to bidder proposals.
6. Adjustment to zirconium sponge inventory price since the proposal provided for purchase at \$5.136 per pound for 54,000 pounds.

TOTAL ADDITION

TOTAL FINAL VALUE



M&C's final proposal quantities are within four tenths of one percent of the Bettis estimate of materials, quantities of which were specified by M&C, and are therefore considered fair and reasonable.

PART E
ATTACHMENT #5
WAPD-NAC-PUR-81

PMRO LETTER ON
CLASSIFICATION OF
LABOR COSTS AT M&C

C O P Y

C O P Y

UNITED STATES
ATOMIC ENERGY COMMISSION
Pittsburgh Naval Reactors Operations Office
P.O. Box 1105
Pittsburgh 30, Pennsylvania

PART B
ATTACHMENT #5
WAPD-NAC-PUR-81

February 9, 1962

General Manager
Westinghouse Electric Corporation
Bettis Atomic Power Laboratory
Pittsburgh, Pennsylvania

Attention: Mr. K. W. Schwaneckamp, Manager, Naval Cores

Subject: CLASSIFICATION OF CERTAIN LABOR COSTS AS DIRECT COSTS
BY METALS & CONTROLS, INC.

Gentlemen:

Attached are two copies of memorandum from J. P. Clifford, Chief, Audit Branch, PNRO, to me, confirming the opinions he presented in our meeting of February 8, 1962 concerning the classification of certain Metals & Controls labor costs as direct costs.

As discussed in our meeting of February 8, 1962, it is considered that the approach you have taken relative to the cost data presented by Metals & Controls is a useful cost and price analysis tool in evaluating the proposal under study.

Very truly yours,

(s) R. J. McCormick
Contract Administration

Enclosure:
Memo fr. J.P. Clifford (2 cys)

Page 2 of 4

C O P Y

R. J. McCormick, Contract Administration

February 8, 1962

J. P. Clifford, Chief, Audit Branch

PART E
ATTACHMENT #5
WAPD-MAC-FUR-81

REVIEW OF METALS AND CONTROLS, INC., NUCLEAR DEPARTMENTS
DIRECT AND INDIRECT LABOR

SYMBOL: AUD:JFC

At a meeting in your office on February 7, 1962 with Schwanekamp, Heeke and Ritter of BAPL they requested that PNRO verify a BAPL listing of job assignments categorized as direct or indirect labor at the subject vendor.

I contacted the SNRO Finance Division, who have performed cost reimbursement audits of the vendor, and asked that they also review the listing within the time allowed. I sent the list to SNRO by TWX on February 7, copy attached.

I reviewed the CY 1960 and 1961 rate audit information available at PNRO. BAPL orally supplied more detailed information on several of the job descriptions. Upon completing my review, I contacted SNRO and we reviewed the listing together.

The following opinions are based on our reviews of the information available in the time allowed:

I. Engineering Labor

- A. Subcontract follow - direct labor.
- B. Project Engineering - direct labor, with the supervisor and clerical help being indirect.
- C. Materials and metallurgical development and follow - direct labor.
- D. Development and follow of techniques for CFDM testing and [REDACTED]
- E. Technician labor on C and D above - direct labor.
- F. Tooling and equipment design - no opinion.
- G. Drafting - direct labor.

COMPARISON OF AUDITED CHANGE NOTICE RATES (1961) FOR NAC WITH ORIGINAL PROPOSAL RATES

	<u>Audited</u>	<u>Original Proposal</u>
Manufacturing Direct Labor	2.25	2.20
Overhead	4.80	3.02
Total Manufacturing	<u>7.05</u>	<u>5.22</u>
Engineering Direct Labor	3.40	3.25
Overhead	5.50	3.69
Total Engineering	<u>8.90</u>	<u>6.94</u>
Quality Control Direct Labor	2.17	2.20
Overhead	2.80	2.01
Total Quality Control	<u>4.97</u>	<u>4.21</u>
Direct and Allocable Expense on Labor & Overhead	37.2%	37.2%
on Materials	20.1%	20.1%
Corporate G&A on Total of above	4.03%	4.03%
Contingency	-0-	3.9%
Profit as % of Price less Contingency	10.0%	10.0%

Although Bettis does not consider the 3.9% contingency unreasonable for a prototype Core, it has not been used in the analyses elsewhere in this attachment. As noted above, all labor and overhead totals used in the original proposal are substantially better than the audited rates. The Direct and Allocable Expense, Corporate G&A, and Profit percentages are the same.



R. J. McCormick

February 8, 1962

PART E
ATTACHMENT #5
WAPD-MAC-PUR-81

II. Quality Control Labor

- A. Subcontract field inspection - direct labor.
- B. Receiving inspection - direct labor.
- C. Quality engineering development and follow-indirect labor. Probably scheduled for performance by Departments 300-Quality Control-General, 301-Inspection - General and 322 Quality Control Engineering. These departments were included in their entirety in overhead by MAC in their CY 1961 change notice rate presentation.
- D. Inspection equipment development - indirect labor. Probably scheduled for performance by Departments 300, 301, 322 discussed above, and Department 302 - Gage Room. These departments were included in their entirety in overhead by MAC in their CY 1961 change notice rate presentation.
- E. Technicians in support of II C and D above - indirect labor for reasons given above.
- F. Chemical laboratory analysis - direct labor.
- G. Metallography and physical testing - direct labor.
- H. Quality Control statistical and record maintenance - indirect labor. Probably scheduled for performance by Department 321 - Quality Control Data Processing, which was included in its entirety in overhead by MAC in their CY 1961 change notice pricing rate.

III. Manufacturing Labor

Materials handling in shop areas - direct labor.

IV. Indirect Labor

The following items are all considered to be indirect labor.

1. Security, 2. Accountability, 3. Criticality, Health and Safety, 4. Works Engineering, 5. Industrial Relations, 6. Clerical, 7. Production Planning, 8. Production Control, 9. Cost Estimating, 10. Sales and 11. All management, including first-line supervisors and foremen.

Enclosure:

TWX dated Feb. 7, 1962



M & C TWX CONFIRMING CLASSIFICATION OF LABOR COSTS

The following TWX from M&C confirmed a telephone conversation between G. G. Ritter of Bettis and G. P. Howland of M&C. It should be noted that the Materials Handling referred to as indirect labor covers only SS Materials Handling. Other Materials Handling personnel charge direct.

"Recur recent telecon on M and C Nuclear direct VS indirect charging practice. The following QC Departments charge direct: QC records, field inspection, receiving inspection, assembly inspection, fuel inspection, QC data processing, metallography, and analytical laboratory. QC engineering is in process of being changed to direct and was quoted as much on Inq. JAS-Y-297800. All manufacturing departments charge direct. The following engineering departments charge direct: applied physics lab, special fuels, component engineering, mechanical engineering, industrial fuel engr, and welding development lab. This manner of charging has been in effect for over a year with the exception of QC data processing changed from indirect to direct in 1961 and QC engineering presently in process of being changed. All other depts. such as accounting, purchasing, health-physics, materials handling housekeeping, product offices, etc. are on indirect or allocated expense basis."

PART G
Attachment #5
WAPD-NAC-PUR-81

REVISED BETTIS ESTIMATE

Attached hereto is the revised Bettis estimate, prepared in the format requested in Attachment #9, Order Proposal Form, to Inquiry JAS-Y-297800.

ATTACHMENT NO. 9

ORDER PROPOSAL FORM FOR

INQUIRY JAS-Y-297800

* January 24, 1962

In accordance with the invitation for proposals for the manufacture and assembly of [redacted] to supply such core and spares to Westinghouse at the total price quoted below, within the delivery time quoted below. The total price quoted consists of the separate amounts indicated opposite each item to be manufactured as set forth below. This proposal shall remain in effect until accepted, but not less than 90 days from the bid due date. This quotation is a revision to the price quoted December 13, 1961. Both prices are noted for comparison.

<u>I. PRICES QUOTED</u>	<u>12/13 Quote</u>	<u>Revised Quote</u>
A. Pre-Evaluation Process Development	\$ <u>120,521</u>	\$ <u>120,521</u>
B. Evaluation Qualification and Process Approval as required by Specifications	\$ <u>377,061</u>	\$ <u>377,061</u>
C. Prices [redacted] for the revised inquiry (Westinghouse supplies some elements per Attachment 7:)		

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY.</u>	<u>12/13 QUOTE</u>	<u>REVISED QUOTE</u>
1	Core Barrel Assembly per drawing 923J233, Group 1 and all referenced drawings and specifications	Assy	1	[redacted]	[redacted]
2	Support Barrel Assembly per drawing 923J230, Group 1 and all referenced drawings and specifications	Assy	1	[redacted]	[redacted]
3	Hold-Down Barrel Assembly per drawing 923J234, Group 1 and all referenced drawings and specifications	Assy	1	[redacted]	[redacted]
4	Adapter Flange Assembly per drawing 923J236, Group 2, and all referenced drawings and specifications.	Assy	1	[redacted]	[redacted]

* This proposal form is totally changed from previous inquiry revisions.

III. QUANTITY OF WESTINGHOUSE FURNISHED MATERIAL REQUIRED BY SKILLER

<u>Reference Inquiry and Spares per Attach. 3</u>		<u>Reference Inquiry and Spares per Attach. 3B</u>	
REVISED		REVISED	
<u>12/13 QUOTES</u>	<u>QUOTES</u>	<u>12/13 QUOTES</u>	<u>QUOTES</u>
<u>58,900 lbs</u>	_____	<u>63,650 lbs</u>	_____
<u>3,110 lbs</u>	<u>1,790 lbs</u>	<u>3,375 lbs</u>	<u>1,960 lbs</u>
<u>3,105 lbs</u>	<u>3,120 lbs</u>	<u>3,380 lbs</u>	<u>3,415 lbs</u>
<u>1,200 lbs</u>	<u>710 lbs</u>	<u>1,215 lbs</u>	<u>710 lbs</u>



- C. Fuel _____
- 1. Enriched (in grams of U-235) - _____
- 2. Natural (in weight exclusive _____

D. _____

E. _____

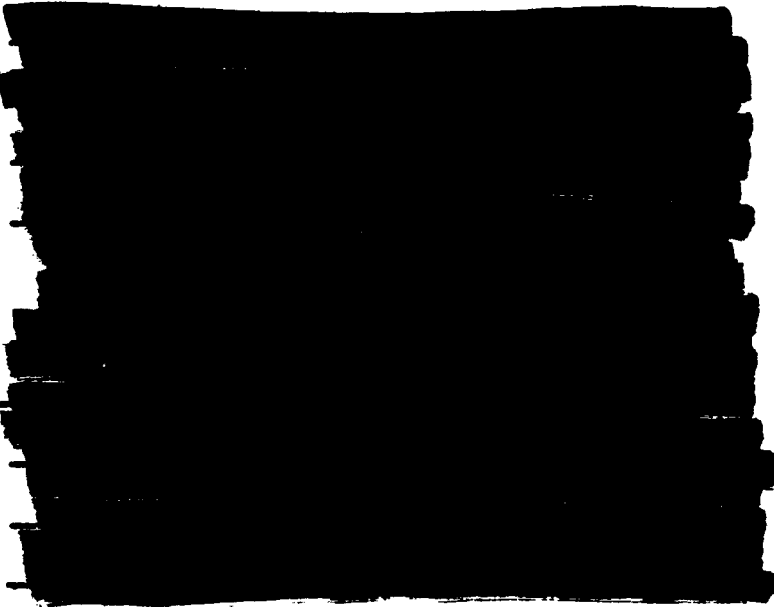
F. _____

- 1. Fuel Assembly _____

- a. 949D039 Item 1
- b. Item 2
- c. Item 3
- d. Item 4

- 2. Production _____

- a. 949D039 Item 1
- b. Item 2
- c. Item 3
- * d. Item 5
- * e. Item 6



Reference Inquiry and Spares for Attach. 3

Reference Inquiry and Spares for Attach. 3B

REVISED

REVISED

12/13 QUOTE QUOTE

12/13 QUOTE QUOTE

G. [REDACTED]

1. Fuel Assembly Qualification

2. Production [REDACTED]

H. [REDACTED]

1. Fuel Assembly Qualification

2. Production [REDACTED]

I. [REDACTED]

[REDACTED]

IV. SELLER REJECTED WESTINGHOUSE FURNISHED ELEMENTS

A. Bidders shall fill in amounts for element rejection. These amounts will be paid by Westinghouse (See Attachment No. 8). Fill in for both core elements and for fuel assembly qualification elements. Prices quoted should be incremental, not cumulative.

1. Critical Inspection Opportunities

<u>Operation</u>	<u>Quantity Charac- teristic</u>	<u>Inspection Method</u>	<u>Price for the Individual Oper</u>	
			<u>* Core Elements</u>	<u>* Qualification Elements</u>
a. Receiving Inspection	[REDACTED]	Data Review	No Charge	Not Applicable
	[REDACTED]	Data Review	No Charge	No Charge
	[REDACTED]	Data Review	No Charge	No Charge
	Uranium Contamina- tion	Alpha Count	[REDACTED]	[REDACTED]
	External Dimensions	Radiography	[REDACTED]	[REDACTED]
	[REDACTED]	Mechanical	[REDACTED]	[REDACTED]
b. Test and Inspect Window Coupon	[REDACTED]	Metallography	[REDACTED]	[REDACTED]
c. Test and Inspect Window Coupon	Corrosion Resistance	Visual and Weight Gain	[REDACTED]	[REDACTED]

[REDACTED]

<u>Operation</u>	<u>Quantity Charac- teristic</u>	<u>Inspection Method</u>	<u>Price for the Individual Oper.</u>	
			<u>* Core Elements</u>	<u>*Qualification Elements</u>
d. Test and Inspect Element	Corrosion Resistance	Visual		
e. Final Element Inspection	[REDACTED]	Ultrasonic		
2. <u>Other Operations</u>				
a. Machine [REDACTED] reference hole				
b. Clean and piece fuel elements.				
c. Machine element [REDACTED]				
d. Clean element.				
e. Final element radiography				
f. Final element dimensional inspection.				
g. Final element alpha count				
h.				
i.				

Note: Bidders should add operations and prices under paragraph II above as required to accommodate their intended manufacturing process. Operations shown in paragraph II are a suggested sequence, not necessarily complete.

* "Core" refers to elements for use in the core or spares. "Qualification" refers to elements for use in fuel assembly qualification.

WAPD-NAC-PUR-27

October 11, 1961

Manager, Pittsburgh Naval Reactors Office
U. S. Atomic Energy Commission
P. O. Box 1105
Pittsburgh 30, Pennsylvania

Attention: Mr. J. D. Blumenstein

Subject: Instrumentation Revision for Inquiry JAS-Y-297800,
Core Cartridge and Spares

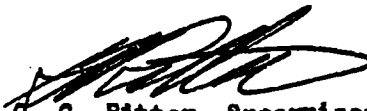
Dear Sir:

WAPD-NAC-PUR-11 and 11A requested approval to transmit the inquiry bid package to the bidders. Your office approved the transmittal on September 21, 1961. The Westinghouse letters referred to a subsequent revision to complete and update portions of the package. Attached hereto is the revision, which completes the design portion of the package by inclusion of instrumented component drawings. Other changes and additions are specified in the letter, WAPD-NAC-PA-188, which will transmit the package revision to the bidders.

There is no change in the bid due date of October 30, 1961, but all bidders have indicated intent to request an extension in the near future.

Your oral approval is requested to transmit the attached inquiry revision package to the bidders on October 16, 1961.

Very truly yours,



G. G. Ritter, Supervisor
Naval Cores Procurement Department

JAS/cy

Attachment

cc: H. H. Hoffman	i. T. Cox
F. W. Warrick	L. B. Prus
K. W. Schwankamp	H. B. Hunter
F. W. Hassett	P. F. Dandon
F. P. Baggerman	G. H. Cohen
E. L. Juell	

WESTINGHOUSE
ELECTRIC CORPORATION



REACTOR ATOMIC POWER DIVISION

WAFD-NAC(M)-109

SETTS SITE
BOX 1469 PITTSBURGH 30, PA.

October 11, 1961

Manager
Pittsburgh Naval Reactors Office
U. S. Atomic Energy Commission
P. O. Box 1105
Pittsburgh 30, Pennsylvania

Attention: Mr. H. I. Hoffman

Subject: [REDACTED] Bid Package (Instrumentation Change)

Reference: (a) WAFD-NAC-43, dated 9-1-61
(b) RD:NAV:REF: [REDACTED] #9517

Dear Sir:

Reference (a) requested approval of the technical portion of [REDACTED] bid package.

Reference (b) submitted its comments on the bid package and concurred in its issue to core vendors subject to additions and changes outlined.

The requested changes were resolved and the bid package was forwarded to the core vendors on September 22, 1961.

The purpose of this letter is to transmit a revised [REDACTED] bid package for approval of the technical portion. The bid package now includes the drawings and specifications available to define the operational and test instrumentation. It contains a revised inquiry and the following revised attachments:

[REDACTED]

[REDACTED]

October 11, 1961

- Attachment #1 General Provisions for [redacted] Core Cartridge
- #2A List of Core Components for one [redacted] Core Cartridge
- #3 List of Spare Components for one [redacted] Core Cartridge
- #3B List of Alternative Spare Components for one [redacted] Core Cartridge
- #4 Master List of Drawings and Specifications for one [redacted] Core Cartridge
- #5 List of Government Material, Components, and Equipment to be Supplied by Westinghouse for [redacted] Core Cartridge
- #6 Special Requirements for Module Testing and Instrumentation Calibration for [redacted]
- #7 Description of Pipes to be Supplied by Westinghouse for [redacted]
- #8 Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel Elements
- #9 Order Proposal Form

The inquiry will solicit quotations for a [redacted]. Therefore, the original Attachments 2 and 3A which pertained [redacted] have been deleted.

In addition to the attachments listed above, the instrumentation arrangement drawings 1 through 10 and related instrumentation detail drawings are enclosed.

Copies of all specifications which are required by the instrumentation addition are enclosed.

Naval Cores Procurement Letter WAFD-NAC(PA)-188, dated October 9, 1961, is also transmitted for your information. This letter, pending PRPD approval, will transmit the instrumentation bid package to the core vendors and itemizes the changes made to the attachments forwarded with the September 22, 1961 inquiry.

NR has requested that certain changes be made to the fuel assembly drawings [redacted] prior to forwarding them to the core vendors. The revised drawings will be available about October 17, 1961. To maintain continuity in the bid package being transmitted, the following drawings have been included for information:

<u>Drawing Number</u>	<u>Revision</u>	<u>Title</u>
917F348	7	Cluster Design
916F707	8	Subassembly Design
922J368	1	Instrumented Cluster
952D996	1	[redacted]
917F455	2	[redacted]
917F459	1	RIS Scabbard Subassembly
952D377	1	Removable Instrumented Subassembly (RIS)

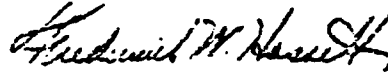
[redacted]

October 11, 1961

These drawings have been listed in Attachment #4 with the next higher revision number in each case so that the master list of contract drawings will be correct for the release of the instrumentation bid package to the core vendors when approval is granted.

Approval of the technical portion of this bid package is requested to permit forwarding the revised instrumentation package to the core vendors for quotations on October 19, 1961.

Very truly yours,



P. W. Enselst, Manager
Manufacturing
Naval Stores Department

/vps

Attachments



Westinghouse Electric Corporation

Bettis Atomic Power Laboratory

Emery Hill, Pittsburgh, Pa.

WAFD-NAC-PA-188

October 9, 1961

Gentlemen:

INQUIRY JAS-I-297800 FOR [REDACTED]

Attached herewith is the revised inquiry bid package for the manufacture and assembly of the [REDACTED] Core Cartridge and spares.

Five copies of your proposal in response to this inquiry should be addressed to Westinghouse, Bettis Atomic Power Laboratory, and must be hand-delivered not later than 2:00 p.m., October 30, 1961, to:

Mr. E. H. Hoffman, Chairman
Joint Contractor Selection Board
Pittsburgh Naval Reactors Office
Bettis Field - D Building
West Mifflin, Pennsylvania

The envelope must be sealed and marked "Proposal for [REDACTED]"

The inquiry has been revised to incorporate instrumentation details not transmitted in the original package. The changes are listed below:

Inquiry Letter:

1. All references to [REDACTED] is the reference design.
 2. Paragraph I, Product, has been revised in wording.
 3. Paragraph II specifies dates of attachments.
 4. Paragraph V-A-4-a has been deleted.
- [REDACTED]
- [REDACTED]

5. Paragraph V-B-1 has been revised to allow use of Westinghouse furnished material for development and evaluation when required by specifications.
6. Paragraph V-D-2 has been expanded in detail.
7. [REDACTED] The former alternate 2 is now alternate 1, paragraph VI-A-1. The former alternates 3 and 5 are deleted. The former alternate 4 is now alternate 2, paragraph VI-A-2. The former alternate 6 becomes alternate 3, paragraph VI-A-3. The former alternate 7 becomes alternate 4, paragraph VI-A-4. In summary, the number of alternates has been reduced from 7 to 4.
8. A reference to the packaging specification Mil-N-19828 has been added to paragraph XVIII.
9. Minor changes in wording have also been made.

Attachment 2, General Provisions:

1. Article 7 has been expanded to more clearly specify process outline submittal requirements.
2. [REDACTED] included in Article 27 (e).
3. Prices [REDACTED] have been deleted from Article 27 (e) and (f). A footnote covers future pricing.
4. Nonrecoverable scrap has been included as material not requiring reimbursement for SS Material in Article 27 (e)(6) and (g)(3).
5. Article 28 has been expanded to include instrumentation calibration requirements.
6. Article 30, Small Business and Labor Area Subcontracting Program, has been added. Two paragraphs from Article 31 have been moved to this article as paragraphs (e) and (f).

Attachment 2 has been deleted [REDACTED]

Attachment 2A, Required Core Components:

1. Instrumentation arrangement drawings have been added.
 2. Reference to the superstructure drawing has been deleted.
- [REDACTED]

- 3. The fact that some components contain Westinghouse furnished items has been emphasized by asterisks and a footnote.
- 4. Three items were added as called out on the general assembly drawing, but not previously noted herein.

Attachment 3, Required Space Components:

- 1. [REDACTED] have been deleted.
(Westinghouse will furnish.)
- 2. Instrumentation arrangement drawings have been added.
- 3. The fact that some components contain Westinghouse furnished items has been emphasized by asterisks and a footnote.

Attachment 3A has been deleted [REDACTED]

Attachment 3B, Alternate Spare Components:

- 1. The same comments apply as to Attachment 3.

Attachment 4, List of Drawings and Specifications:

- 1. Instrumentation drawings have been added.
- 2. Westinghouse furnished items have been noted by asterisks and a footnote.
- 3. Corrections were made for incorrect drawings and/or revision numbers.
- 4. The following were added in place of the items noted as deleted:

<u>Added</u>	<u>Deleted</u>
EX-0007	293772 and NC-1242
NR-11	NR-0006D
NC-1241	None
NC-1248	None
[REDACTED]	[REDACTED]
Mil-E-22245	[REDACTED] Mil-E-17496
Mil-E-22200/3	None
Mil-Std-700A	None
Mil-W-5846B	None
Mil-T-22300	None
NR-5 STD F	None
NR-5 STD G	None

[REDACTED]

<u>Added</u>	<u>Deleted</u>
C/N #1 for NAVSHIPS 250-1500-1 dated Sept. 1, 1961	AP-293768
None	AP-292065
AP-293769	None
QQA-325 B	None
QQA-367 E & C/N 1	None
WAPD-NAC(E) 241	None
WAPD-NAC(E) 241 Supplement	None

5. A head area layout drawing and a master instrumentation drawing have been added to the reference drawing list.
6. The superstructure drawing has been moved to the reference list.

Attachment 5, List of Furnished Government Property:

1. References to requirements [REDACTED]
2. [REDACTED]
3. Some containers have been added.
4. [REDACTED]

Attachment 6 has been revised to include instrumentation calibration as well as module testing.

Attachment 7, Westinghouse Furnished Fuel [REDACTED]

1. [REDACTED] drawings have been added.
2. Item number [REDACTED] added to clarify requirements.

Attachment 8 is unchanged.

Attachment 9, Order Proposal Form:

1. This form has been revised in total to accommodate all revisions, changes and additions made in the inquiry.

Very truly yours,

G. G. Ritter, Supervisor
Naval Cores Procurement Department

/lfs

[REDACTED]

October 9, 1961

INQUIRY JAS-Y-297800

██████████ CORE CARTRIDGE

You are requested to submit firm priced proposals to meet the requirements and alternatives detailed in this inquiry for the manufacture of ██████████ Westinghouse Electric Corporation's Bettis Atomic Power Laboratory is herein referred to as Westinghouse, the successful bidder is herein referred to as Seller.

I. PRODUCT

- A. Manufacture one ██████████ Core Cartridge and one set of spare components using some Westinghouse furnished fuel and poison elements and some Seller fabricated elements per applicable order documents.
- B. Assemble and weld the modules to each other and to the peripheral bars per applicable order documents. Seller shall not make the weld joining the peripheral seal bars to the adapter flange. This weld shall be the responsibility of Westinghouse.
- C. Assemble the core cartridge and test the rod drive mechanisms per applicable order documents.
- D. Pack and package the core cartridge assembly with mechanisms in place, the cover plate, the mechanism outer housings, and other equipment and material.
- E. Move the packaged core cartridge, other components, and spares to a rail siding and load and secure them on a railroad car per applicable documents. The FOB point shall be the rail car with loading and securing part of Seller's responsibility.

II. The inquiry bid package is composed of the cover letter dated October 16, 1961; Inquiry JAS-Y-297800 dated October 9, 1961; and the following nine attachments, which will be applicable to any order resulting from this inquiry.

Attachment No. 1 - General Provisions for ██████████ Core Cartridge dated October 9, 1961

Attachment No. 2A - List of Core Components for one ██████████ Core Cartridge, dated October 9, 1961

Attachment No. 3 - List of Spare Components for one ██████████ Core Cartridge, dated October 9, 1961

Attachment No. 4 - Master List of Drawings and Specifications for ██████████ Core Cartridge, dated October 9, 1961

- Part I - List of Order Drawings
- Part II - List of Reference Drawings
- Part III - List of Order Specifications and Standards
- Part IV - List of Specifications Considered to be Binding on Seller Unless an Improved Process is Developed by Seller and Approved by Westinghouse
- Part V - List of Reference Specifications



Attachment No. 5 - List of Government Material, Components, and Equipment to be Supplied by Westinghouse for [REDACTED] Core Cartridge, dated October 9, 1961

Attachment No. 6 - Special Requirements for Module Testing and Instrumentation [REDACTED] dated October 9, 1961.

Attachment No. 7 [REDACTED]

Part I - Description of fuel [REDACTED] supplied by Westinghouse [REDACTED] Core Cartridge.

Part II - Description of fuel (natural) [REDACTED] supplied by Westinghouse for fuel assembly process qualification.

Attachment No. 8 - Schedule of Prizes to be Paid by Westinghouse to Seller for Rejected Fuel [REDACTED]

Attachment No. 9 - Order Proposal Form for [REDACTED] dated October 9, 1961.

III. PRICE

- A. Quote firm prices per Attachment No. 9, Order Proposal Form.
- B. Quote alternates, as explained in paragraph VI of this inquiry, per Attachment No. 9, Order Proposal Form.
- C. Prices shall be firm for not less than 90 days from date of proposal and not subject to change without Westinghouse approval.

IV. DELIVERY

- A. Quote firm delivery periods per Attachment No. 9, Order Proposal Form. The required core delivery date is not later than [REDACTED]
 1. Note that bidders are to quote dates on which element, subassembly, cluster, and control rod qualifications are to be complete. These will become contract dates and will be included in Article 10 of Attachment 1 when the order is placed.

V. STARTING MATERIAL

- A. Westinghouse will furnish certain items to Seller for use in fabrication of the order. These items are specified in Attachment No. 5, List of Government Material, Components, and Equipment to be Supplied by Westinghouse for [REDACTED] Core Cartridge, hereinafter referred to as Attachment No. 5. The terms of supply are recorded in detail in Attachment No. 1, General Provisions for [REDACTED] Core Cartridge, hereinafter referred to as Attachment No. 1. The items referred to are discussed by general grouping in subparagraphs B, C, D, E, F, G, H, and I of this paragraph, V, Starting Material. Where bidders are

give the right to select quantities of material to be supplied it should be noted that these quantities will be a portion of the evaluation loading award of the order. The following conditions are uniformly applicable to Westinghouse supplied items for the order, unless otherwise noted.

1. Westinghouse will furnish to Seller analytical test and inspection records for the items furnished. Based upon these test and inspection results or such additional tests and inspections as Seller may elect to make at its own expense, Seller shall advise Westinghouse in writing of its final acceptance; provided, however, Seller shall be obligated to accept items which meet the specification requirements of the order. In the event Seller fails to notify Westinghouse of acceptance or rejection (i) within (30) days of receipt of items and reports, or (ii) prior to use of items, other than testing, whichever occurs first, final acceptance shall be conclusively presumed. This subparagraph does not apply to fuel and poison elements which are covered in subparagraph V-F.
 2. Seller, upon delivery to it of the Westinghouse supplied items, assumes the risk of, and shall be responsible for, any loss or destruction of or damage to such items.
 3. After final acceptance by Seller Seller shall be solely responsible for such items, and shall bear all risks for subsequent rejection whether or not due to unknown or latent defects. Westinghouse shall not be financially obligated to replace defective or rejectable components nor be liable for loss by reason of plant shutdown, non-operation or increased expense of operation or any other consequential loss or damage. This subparagraph does not apply to fuel and poison elements which are covered in subparagraph V-F.
 4. The items will be supplied at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. Replacement items for Westinghouse supplied items rejected by Seller will also be supplied in this manner.
- B. Core structural material will be furnished per Section 1.7 of Attachment No. 5 and paragraph (a), Article 27 of Attachment No. 1.
1. This material shall not be used by Seller for development and evaluation work under this order, except where specifically required by order specifications.
 2. This material is not intended to be sufficient for all requirements of the order. It is Seller's responsibility to procure, at his own expense and in time to meet the manufacturing schedule, all additionally required material.

able to residue, scrap and unused structural material shall vest in the seller after completion of the order.

and equipment shall be furnished per Section 3 of Attachment No. 5 and paragraph (a), Article 27 of Attachment No. 1.

Seller assumes full responsibility for all operations utilizing these items and for their successful completion of those operations.

Seller is responsible for procurement, at his own expense and in time to meet the manufacturing schedule, of all additional tools and equipment.

and equipment shall be furnished per Section 2 of Attachment No. 5 and paragraph (a), Article 27 of Attachment No. 1.

1. Seller assumes full responsibility for these components after his final acceptance.
2. Seller is responsible for procurement, at his own expense, in time to meet the manufacturing schedule, and per Westinghouse order requirements, of all additional components required to complete the order.

shall be furnished per Section 1.6 of Attachment No. 5 and paragraph (d), Article 27 of Attachment No. 1.

If additional is required it will be furnished by Westinghouse and Seller shall be charged for the additional according to paragraph (d), Article 27 of Attachment No. 1.

1. Seller shall be financially responsible for material (not returned to Westinghouse in final product or as scrap, residue or unused material); Seller shall be charged for any material not returned as specified in paragraph (d)(5), Article 27 of Attachment No. 1.

and poison elements will be furnished per Part I of Attachment No. 7.

and paragraph (e), Article 27 of Attachment No. 1.

1. Westinghouse will furnish all of the production quantities of the types of elements listed below:

- a. [redacted] per drawing 949-D-039
- b. [redacted] per drawing 950-D-376
- c. [redacted] per drawing 950-D-381

2. Westinghouse will also furnish all of the subassembly qualification elements required by Seller per Part II of Attachment No. 7 and paragraph (f), Article 27 of Attachment No. 1. [redacted] rather than enriched, fuel material.

3. Bidders shall designate on Attachment No. 9, Order Proposal Form, the amounts of core and qualification elements required. If additional elements are required during the order, Westinghouse will furnish them and Seller shall be charged per paragraph (e) (2) or (f) (2), Article 27, Attachment No. 1.
4. Seller shall be financially responsible for the value of all enriched SS Material whether supplied in elements [REDACTED] per the following subparagraph G. Seller shall be charged at the rate of [REDACTED] of U-235 which is not returned to Westinghouse as either finished product or recoverable scrap. Over and above other charges for additionally supplied elements [REDACTED] Seller shall be charged at the rate [REDACTED] of U-235 contained in additional material.
5. Seller shall be responsible for fabrication of all elements other than those listed in subparagraph W-5-1 above.
6. See paragraphs (e) and (f), Article 27 of Attachment No. 1 for full details and conditions of supply, acceptance and rejection of elements.
7. Bidders shall fill in prices in Attachment No. 8, Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel Elements for [REDACTED] as a portion of their order proposals.
8. Seller shall maintain segregation of SS Material as required in article 27 of Attachment 1; segregation shall include segregation of scrap from any downgraded SS Material. This applies to any SS Material on the order.
- G. [REDACTED] per section 1.1 of Attachment No. 5 and paragraph (g), Article 27 of Attachment No. 1.
1. Bidders shall designate [REDACTED] required on the Order Proposal Form, Attachment No. 9. If additional are required, provisions covering this are specified in paragraph (g)(2), Article 27 of Attachment No. 1. Seller will be charged for additional as noted in the referenced paragraph.
- H. [REDACTED] per sections 1.2, 1.3, and 1.4 of Attachment No. 5 and paragraph (h), Article 27 of Attachment No. 1.
1. Bidders shall designate amount [REDACTED] [REDACTED] If additional is required, provisions covering this are specified in paragraph (h)(2), Article 27 of Attachment No. 1. Seller shall be charged for additional as noted in the referenced paragraph.
2. Seller must maintain identity of, and keep segregated at all times, [REDACTED] [REDACTED] It must be further segregated from other materials. This segregation shall be maintained through all manufacturing steps and in scrap and residues.

I. [REDACTED] will be furnished per Section 1.5 of Attachment No. 5 and paragraph (1), Article 27 of Attachment No. 1.

1. Bidders shall designate amounts [REDACTED] If additional is required, provisions covering this are specified in paragraph (1)(2), Article 27 of Attachment No. 1. Seller shall be charged for additional as noted in the referenced paragraph.

VI. ALTERNATE PROPOSALS

A. In addition to a quotation for the product as described in paragraph I of this inquiry, quote the following four alternate proposals. The Order Proposal Form, Attachment No. 9 has been prepared so as to provide a ready format for quoting the alternates. [REDACTED]

1. The first alternate is that Seller shall fabricate all poison and fuel elements, [REDACTED] noted in Attachment 7. In this case, paragraph (e) of article 27, Attachment 1 is deleted. An additional paragraph (k) is added to article 27, Attachment 1, and is as follows:

"(K) Poison [REDACTED]

(1) Westinghouse will furnish [REDACTED] per (NR-6, NR-9 and Ordering Date) at no cost to Seller, FOB Carrier, Seller's Plant, freight prepaid.

(2) [REDACTED]

- a. The ordering data [REDACTED] is attached to this inquiry.
- b. Westinghouse will supply only subassembly and cluster [REDACTED] These elements contain no enriched SS Material.

[REDACTED]

[REDACTED]

Drawings attached to this inquiry to not specify pinion loadings. The loadings are as follows:

(1) [REDACTED]

(2) [REDACTED]

[REDACTED]

- 2. The second alternate is that Seller shall provide die forged blocks for the seal blocks and peripheral seal bars. This alternate does not change the list of supplied material in Attachment No. 5. Seller may use Westinghouse furnished material as starting material.
- 3. The third alternate is a different set of spares from those listed in Attachment No. 3. The alternate list is contained in Attachment No. 3-B, dated October 9, 1961.

[REDACTED]

Fourth ... Seller shall fabricate a complete extra set of support seal block assemblies. The set consists of the following:

	DRAWING	Quantity
[REDACTED]	An assembly of 923026, Part 923026, Part 1 and 923026, Part 2 and 923026, Part 3	[REDACTED]
[REDACTED]	An assembly of 923028, Part 1 923028, Part 2 and 923028, Part 3	[REDACTED]
[REDACTED]	An assembly of 923027, Part 1; 923027, Part 2 and 923027, Part 3	[REDACTED]

... also fabricate an additional set of peripheral seal bars and ... Seller shall assemble the support seal blocks and the peripheral seal bars into an adapter flange ... which will be supplied to Seller at no cost by ... Seller's Plant, freight prepaid. Seller shall hold the assembly per the superstructure drawing 923243. Seller shall pack and ship the welded assembly and ship as directed by ...

QUALITY CONTROL

A. The contractor shall establish quality control and analytical and inspection procedures necessary to assure compliance with the order specifications.

SUBCONTRACTING

A. Any proposal should identify any work you expect to subcontract. A description of the work, its estimated dollar value and the proposed subcontractor should be furnished. It is to be recognized that in the event your company is awarded a contract, specific approval to subcontract any of the work under the contract must be secured. In considering such requests for approval, Westinghouse reserves the right to review process outlines and manufacturing methods with respect to certain work. This information may be transmitted in your technical proposal. See inquiry paragraph XIII-A-4.



IX SPECIAL TOOLING

A. A detailed description of the special tooling required for your proposal. The special tooling items have been included in your proposed price breakdown and in the price breakdowns. Any special tooling required for the work, including tooling, which you desire to be used in the manufacture of the core, which your proposal should be identified.

X USE OF GOVERNMENT-OWNED FACILITIES AND EQUIPMENT

A. Your proposal should identify all government-owned facilities or equipment to be used in the manufacture and assembly of the core, including work to be performed by any lower-tier contractors.

XI SECURITY MATTER

A. Your proposal should identify all work to be done under DSS Regulation No. 1 for the manufacture of the core.

XII OTHER TERMS

A. Other terms will be those included in the General Provisions, Attachment No. 1. Any addition to these terms or any of the other enclosures included in this invitation for proposals which you may wish to make, or any change thereto which you may wish to propose should be clearly specified in your proposal, including justification therefor.

XIII TECHNICAL PROPOSAL

A. Include a technical proposal in your quotation in addition to specific requirements listed in this invitation and the core drawings. The technical proposal shall contain the following as a minimum:

1. A detailed listing of manpower and facilities to be used in fabrication of the core cartridge. Note facilities available at time of proposal submittal and those to be procured or fabricated thereafter. Special attention and detail should be accorded areas concerned with fuel element and cluster manufacture.

A listing of engineering and technical support personnel and the periods and dates they will be available and employed on this core.

Plans and schedules for facility and equipment development, process development and qualification, manufacture, and assembly.

Subcontracts

a. Items to be subcontracted:

- (1) Schedules

Vendors being considered:

- (1) Security status. If not fully cleared for AEC work, including present or recent (within one year) clearances for shop work on components similar to those contemplated for subcontract, note all details which lead you to believe that clearances can be obtained within manufacturing schedules. Further, detail subcontractor plans concerning security, and note his willingness to make alterations or modifications to obtain AEC facility clearance approval.

3. List other work in your shop during this period.

XIV BASIS FOR AWARD

1. Award of any order or orders resulting from this inquiry shall be made by subcontract under Prime Contract AT-(11.1)-48EN-1a with the Commission. Award shall be made on a basis which will be most advantageous to the Government after consideration of price, delivery, technical proposals, shop capability, required quantities of Government material, etc. It is to be understood that negotiations may be undertaken by Westinghouse on the basis of the proposals. Westinghouse reserves the right to reject any or all proposals.

XV PURCHASE ADMINISTRATION

1. Orders awarded as a result of this inquiry will be administered by Westinghouse. All communications in connection with the orders will be directed to the attention of the assigned Westinghouse Purchasing Department, unless otherwise specifically advised.

2. Technical communications by Seller in connection with the orders will be transmitted on the following forms:

1. Approval Request, Form 73649
2. Request for Engineering Change, Form 73650
3. Deviation Notice Disposition Request, Form 73651

3. Official communications from Westinghouse to Seller will be in the following forms:

1. Purchase Order Change Notices
2. Purchase Order Information Release
3. Signed copies of Form 73649, 73650, and 73651

Telegrams or letters from the Westinghouse Naval Core Procurement Department may be used as action releases by Seller and will be confirmed on one of the foregoing documents.

D. The following reports will be required of Seller and must be submitted in a form acceptable to Westinghouse.

1. Thirty days after receipt of order Seller will submit to Westinghouse a complete detailed schedule for the entire scope of work of the order.
2. On the 15th day and the last day of each month for the duration of the order, Seller will submit by Air Mail, a detailed production status report for each component part.
3. On the first day of each month following receipt of the order and for the duration of the contract, Seller will submit a "Technical Progress Report" stating in detail, the accomplishments of the prior month and future plans in the areas of process development, inspection, and quality control.
4. Weekly critical items report.

XVI. INQUIRY CHANGES

- A. Certain areas of design are not firm or are incomplete as of the mailing date of this inquiry. It is probable that Westinghouse will alter the inquiry prior to the bid due date of October 30, 1961. This alteration will be made by an inquiry change on or about October 6, 1961.

XVII. CHANGE NOTICE PRICING FORMULA

- A. In order to facilitate change notice pricing on the order, a pricing formula shall be established prior to award of the order. Note that the order proposal form requests that costing rates be included. The rates shall be those applicable to the order, and shall be such as can be verified by Government audit. During the course of the order, change notice quotations shall be supplied in breakdown form, that form varying depending on the item concerned. Price breakdowns shall be supplied, if requested by Westinghouse, on subcontracted changes as well as work actually performed by Seller.

XVIII. SELLER SUPPLIED ITEMS

- A. Seller shall supply all material, components, tools, property and all other things necessary to meet the order requirements which are not specifically noted as being furnished by Westinghouse. Shipping containers shall be designed and fabricated, unless per MIL-N-19628 unless otherwise specifically noted as being supplied by Westinghouse.

[REDACTED]

GENERAL PROVISIONS FOR [REDACTED] CORE CARTRIDGE
INQUIRY JAS-Y-297800

Attachment No. 1

* December 6, 1961

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[REDACTED]

*Changed from 10/23/61, Attachment 1. [REDACTED]

ATTACHMENT NO. 1, INQUIRY JAS-Y-297800

GENERAL PROVISIONS,

1. DEFINITIONS

As used throughout this order, the term "Government" means the United States of America; the term "Commission" means the United States Atomic Energy Commission or its duly authorized representatives; the term "Westinghouse" means Westinghouse Electric Corporation, Bettis Atomic Power Laboratory. The term "order" shall mean the same as the terms "contract" and "subcontract" and the term "Seller" shall mean the same as the term "subcontractor".

2. GENERAL

This order (which term shall be deemed to include related plans, drawings, specifications, and other documents specifically identified herein) contains the entire agreement of the parties, and no modification, alteration, waiver, or other provision which is inconsistent with or in addition to the provisions of this order shall have any force or effect unless the same shall be incorporated in this order by change notice thereto in accordance with the Changes Article of these General Provisions. Failure of Westinghouse to enforce any of its rights hereunder shall not constitute a waiver of such rights or of any other rights under this order.

3. CHANGES, EXTRAS AND SUBSTITUTIONS

(a) Westinghouse may at any time, by a written change notice issued by Westinghouse Purchasing Department, and without notice to the sureties, make changes, within the general scope of this order, in any one or more of the following: (i) drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for Westinghouse in accordance therewith; (ii) method of shipment or packing; and (iii) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for, the performance of any part of the work under this order, whether changed or not changed by any such change notice, an equitable adjustment shall be made in the order price or delivery schedule, or both, and the order shall be modified in writing accordingly. Any claim by Seller for adjustment under this article must be asserted within 30 days from the date of receipt by Seller of the notification of change: Provided, however, that Westinghouse, if it decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this order. Where the cost of property made obsolete or excess as a result of a change is included in Seller's claim for adjustment, Westinghouse shall have the right to prescribe the manner of disposition of such property. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes". However, nothing herein shall excuse Seller from proceeding with this order as changed.

(b) Except as otherwise provided for in this order, Westinghouse will not pay for additional work or extras unless such additional work or extras have been ordered in writing and the price therefor agreed upon.

(c) Seller shall not substitute other materials or accessories for those specified in the order without written consent of Westinghouse.

(d) No variation in quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified elsewhere in this order.

4. FEDERAL, STATE, AND LOCAL TAXES

(a) As used throughout this article, the term "tax inclusive date" means the date of this order. As to additional supplies or services procured by modification to this order, the term "tax inclusive date" means the date of such modification.

(b) Except as may be otherwise provided in this order, the order price includes all Federal, State, and local taxes and duties in effect and applicable to this order on the tax inclusive date, except taxes from which the Government, Seller, or the transactions or property covered by this order are then exempt. Unless specifically excluded, duties are included in the order price.

(c) (1) If Seller is required to pay or bear the burden (i) of any tax or duty, which either was not to be included in the order price pursuant to the requirements of paragraph (b), or was specifically excluded from the order price by a provision of this order; or (ii) of an increase in rate of any tax or duty, whether or not such tax or duty was excluded from the order price; or of any interest or penalty thereon, the order price shall be correspondingly increased: Provided, that Seller warrants in writing that no amount for such tax, duty or rate increase was included in the order price as a contingency reserve or otherwise: And provided further, That liability for such tax, duty, rate increase, interest, or penalty was not incurred through the fault or negligence of Seller or its failure to follow instructions of Westinghouse.

(2) If Seller is not required to pay or bear the burden, or obtains a refund or drawback, in whole or in part, of any tax, duty, interest, or penalty which (i) was to be included in the order price pursuant to the requirements of paragraph (b), (ii) was included in the order price, or (iii) was the basis of an increase in the order price, the order price shall be correspondingly decreased or the amount of such relief, refund, or drawback shall be paid to Westinghouse as directed by Westinghouse. The order price also shall be correspondingly decreased if Seller through its fault or negligence or its failure to follow instructions of Westinghouse, is required to pay or bear the burden, or does not obtain a refund or drawback of any such tax, duty, interest, or penalty. Interest paid or credited to Seller incident to a refund of taxes shall inure to the benefit of Westinghouse to the extent that such interest was earned after Seller was paid or reimbursed by Westinghouse for such taxes.

(3) Invoices or vouchers covering any adjustment of the order price pursuant to this paragraph (c) shall set forth the amount thereof as a separate item and shall identify the particular tax involved.

(4) Nothing in this paragraph (c) shall be applicable to social security taxes; net income taxes; excess profit taxes; capital stock taxes; unemployment compensation taxes; or any State and local taxes, except those levied on or measured by the order or sales price of the services or completed supplies furnished under this order, including gross income taxes, gross receipts taxes, sales and use taxes, excise taxes, or franchise or occupation taxes measured by sales or receipts from sales.

(5) No adjustment of less than \$100 shall be made in the order price pursuant to this paragraph.

(d) Unless there does not exist any reasonable basis to sustain an exemption, Westinghouse agrees upon request of Seller, without further liability except as otherwise provided in this order, to furnish evidence appropriate to establish exemption from (i) any Federal tax, which Seller warrants in writing was excluded from the order price, or (ii) any State or local tax: Provided, That evidence appropriate to establish exemption from duties will be furnished, and Government bills of lading will be issued, only at the discretion of Westinghouse. In addition, Westinghouse may furnish evidence appropriate to establish exemption from any tax that may, pursuant to this article, give rise to either an increase or decrease in the order price.

(e) (1) Seller shall promptly notify Westinghouse of all matters pertaining to Federal, State, and local taxes and duties that reasonably may result in either an increase or decrease in the order price.

(2) Whenever an increase or decrease in the order price may be required under this article, Seller shall take action as directed by Westinghouse, and the order price shall be equitably adjusted to cover the costs of such action, including any interest, penalty, and reasonable attorney's fees.

(f) For the purpose of this order under this Article 4, personal property, which is acquired by Seller or furnished by Westinghouse, and used in the performance of this order, title to which on the tax assessment date is vested in the Government, and any interest which Seller may have in such property, are considered exempt from personal property taxes. Further, the provisions of paragraph (c) of this Article shall be applicable to personal property taxes that may be assessed on such property or Seller's interest therein, and the order price shall be increased or decreased in accordance with the provisions of such paragraph (c) for such taxes or the allocable portion thereof, and any interest or penalty thereon which would otherwise be subject to adjustment under paragraph (c). Seller warrants that the prices in this order do not include any amounts as a contingency reserve or otherwise on account of any such taxes on personal property or any interest therein.

5. INSPECTION

(a) All work (which term throughout this article includes without limitation raw materials, procedures and processes, components, intermediate assemblies and end products) required by this order shall be subject to inspection and test by Westinghouse and the Government, to the extent practicable at all

times and places including the period of manufacture, and in any event prior to acceptance. Seller is responsible for and shall upon Westinghouse's request furnish evidence of compliance with all requirements of the order, and inspection and test by Westinghouse or the Government of any work does not relieve Seller from any responsibility to meet the order requirements.

(b) In case any supplies or lots of supplies are defective in material or workmanship or otherwise not in conformity with the requirements of this order, Westinghouse shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction. Supplies or lots of supplies which have been rejected or required to be corrected shall be removed, or, if permitted or required by Westinghouse, corrected in place by and at the expense of Seller promptly after notice, and shall not thereafter be tendered for acceptance unless the former rejection or requirement of correction is disclosed. If Seller fails promptly to remove such supplies or lots of supplies which are required to be removed, or promptly to replace or correct such supplies or lots of supplies, Westinghouse either (i) may by contract or otherwise replace or correct such supplies and charge to Seller the cost occasioned Westinghouse thereby, or (ii) may terminate this order for default as provided in the clause of this order entitled "Default". Unless Seller corrects or replaces such supplies within the delivery schedule, Westinghouse may require the delivery of such supplies at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction or price shall be a dispute concerning a question of fact within the meaning of the clause of this order entitled "Disputes".

(c) If any inspection or test is made by Westinghouse or the Government on the premises of Seller or a lower-tier subcontractor, Seller without additional charge shall provide all reasonable facilities and assistance for the safety and convenience of Westinghouse and Government inspectors in the performance of their duties. If Westinghouse or Government inspection or test is made at a point other than the premises of Seller or a lower-tier subcontractor, it shall be at the expense of Westinghouse except as otherwise provided in this order; Provided that in case of rejection Westinghouse shall not be liable for any reduction in value of samples used in connection with such inspection or test. All inspection and tests by Westinghouse and the Government shall be performed in such a manner as not to unduly delay the work. Westinghouse reserves the right to charge to Seller any additional cost of Westinghouse or Government inspection and test when work is not ready at the time such inspection and test is requested by Seller or when reinspection or retest is necessitated by prior rejection. Acceptance or rejection of the work shall be made as promptly as practicable after delivery, except as otherwise provided in this order; but failure to inspect and accept or reject supplies shall neither relieve Seller from responsibility for such supplies as are not in accordance with the order requirements nor impose liability on Westinghouse and the Government therefor.

(d) The inspection and test by Westinghouse or the Government of any supplies or lots thereof does not relieve Seller from any responsibility regarding defects or other failures to meet the order requirements which may be discovered prior to acceptance. Except as otherwise provided in this order, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

(e) Inspection and test requirements specifically required by this order are for the convenience of Westinghouse and the Government and do not relieve Seller of his responsibility to provide a high quality product and one which meets all applicable order specifications. If during Westinghouse's or Government's own test or inspection of the equipment after its delivery, any condition is uncovered which fails to meet all the applicable order specifications, Seller is financially responsible in accordance with the provisions of Article 6 - Warranty, for correcting these conditions; this requirement applies irrespective of the extent of testing or inspection specifically required of Seller by the order.

(f) Seller shall provide and maintain and require its lower-tier subcontractors to provide and maintain an inspection and quality control system acceptable to Westinghouse covering the work hereunder. Records of all inspection work by Seller and its lower-tier subcontractors shall be kept complete and available to Westinghouse or the Government during the performance of this order and for such longer period as may be specified elsewhere in this order.

6. WARRANTY

(a) In addition to its obligations under the provisions of this order concerning inspection and acceptance, except for those Westinghouse furnished fabricated components per Article 27, paragraph (d) of these provisions Seller warrants materials and workmanship, that the items furnished under this order will be manufactured in accordance with the applicable plans, drawings, specifications and approved processes. Provided, however, Seller shall also warrant any work Seller may perform or material Seller may furnish with respect to Westinghouse furnished fabricated components. In the event that Westinghouse, within seven years after delivery or one year after the date of start-up for power production of the reactor core, whichever occurs first, ascertains that such items supplied under this order are defective in materials or workmanship, are not in accordance with the applicable plans, drawings, specifications, and so notifies Seller, Seller agrees promptly to make good any defects in materials or workmanship or to correct such items in accordance with such drawings, specifications, including approved process outlines without cost to Westinghouse. Westinghouse has the right to require Seller to correct in place any item of equipment delivered under this order or to return such equipment to Seller for correction. In exercising this right, Westinghouse will notify Seller which alternative it proposes to take. In this connection, Westinghouse will be reasonable in making its election in terms of its and the Government's time requirements, the relative economics of each course and the particular circumstances at the time of election, giving due regard to any reasonable requests of Seller. In the event that Seller is required to correct in place, Seller shall not be required to incur costs for such correction in excess of an amount equal to the price of this order. In the event repair or replacement of any item is required, Westinghouse shall be responsible for removing the defective item from the reactor plant system and Seller shall, upon completion of repair or replacement, make delivery as directed by Westinghouse, but shall not be obligated to incur costs in excess of an amount equal to the price of this order plus shipping (to and from Seller's plant) and packing and packaging charges, nor shall Seller be responsible for any costs of reinstallation of such item in the reactor plant system: Provided, however, Seller shall have sole responsibility to remove and repair or replace and reinstall defective items upon request by Westinghouse made prior to installation of the reactor core in the reactor plant system.

(b) Items which Seller is required to make good or correct in accordance with the provisions of this Article may have become contaminated with radioactivity through use. Should the level of radioactivity of any such item be sufficient to create by itself a "radiation area" as defined in 10 C.F.R. Sec. 20.202 as in effect on the date of this order, Seller shall nevertheless promptly make good or correct such item as directed by Westinghouse. In the event Seller's costs of making good or correcting any such item are increased solely by reason of the level of radioactivity thereof which exceeds the level specified in the definition of "radiation area", an equitable adjustment shall be made in the order price, and such adjustment shall be agreed to in writing. With respect to any such item having a level of radioactivity sufficient to create by itself a "radiation area", Westinghouse shall have the right at its election to require Seller to replace such item at a reasonable price to be mutually agreed upon, taking as a credit against such price the estimated cost of Seller's making good or correcting such item but not including additional costs which would have been incurred by Seller solely by reason of the level of radioactivity thereof which exceeds the level specified in the definition of "radiation area". Failure to agree to an equitable adjustment in price, or a reasonable price for a replacement item as provided for herein, shall be a dispute concerning a question of fact within the meaning of the Article of this order entitled "Disputes".

(c) Seller's warranty as provided in this Article shall continue as to corrected or replacing supplies, or, if only parts of such supplies are corrected or replaced, to such corrected or replacing parts, for a further period of one year from the date of start-up for power production of the entire reactor system or systems in which such corrected or replacing supplies or parts are installed or seven years from the date of redelivery to Westinghouse of such corrected or replacing supplies or parts, whichever period is shorter. If Westinghouse does not require correction or replacement of defective or nonconforming supplies, Seller, if required by Westinghouse within a reasonable time after the notice of defect or nonconformance, shall repay such portion of the order price of the supplies as is equitable in the circumstances.

(d) If Seller fails to proceed with reasonable promptness to make any repair, correction or replacement in accordance with the provisions of this article, Westinghouse reserves the right to cause such repair, correction or replacement to be made and Seller agrees to reimburse Westinghouse for the costs incurred thereby.

(e) The warranty expressed in this article constitutes the sole warranty except as to title, made by Seller with respect to the items supplied under this order.

7. APPROVAL OF DESIGN PLANS - PROCEDURES

As directed by Westinghouse, Seller shall submit process outlines and associated working drawings and process specifications for approval by Westinghouse. Seller shall not begin fabrication until a Westinghouse approved process has been developed, except where Westinghouse does not require process outline submittal.

• See Attachment 12.

8. CONSEQUENTIAL DAMAGES

Seller shall not be liable to Westinghouse or the Government for loss by reason of plant shutdown, non-operation or increased expense of operation of other equipment, damage to or destruction of the plant or any other consequential loss or damage. Except as otherwise provided in this order, this article shall not be construed to relieve Seller from any public liability, nor shall it be construed as an undertaking by Westinghouse or the Government to indemnify Seller against such public liability.

9. RESPONSIBILITY FOR SUPPLIES

Except as otherwise provided in this order, (i) Seller shall be responsible for the supplies covered by this order until they are delivered at the designated delivery point, regardless of the point of inspection; (ii) after delivery to Westinghouse at the designated point and prior to acceptance by Westinghouse or rejection and giving notice thereof by Westinghouse, Westinghouse shall be responsible for the loss or destruction of or damage to the supplies only if such loss, destruction, or damage results from the negligence of officers, agents, or employees of Westinghouse or the Government acting within the scope of their employment; and (iii) Seller shall bear all risks as to rejected supplies after notice of rejection, except that Westinghouse or the Government shall be responsible for the loss, or destruction of, or damage to the supplies only if such loss, destruction or damage results from the gross negligence of officers, agents, or employes of Westinghouse or the Government acting within the scope of their employment.

10. DELIVERIES

(a) Delivery of the items supplied under this order shall be made upon the following dates, provided (i) all material to be furnished to the Seller or its designees by Westinghouse in accordance with the provisions of Article 27 of the order has been supplied in accordance with the schedule mutually agreed upon, except for additional material and such material as the Seller agrees to accept at a later date, and (ii) manufacturing releases are given to Seller by Westinghouse within fourteen days after completion of the corresponding evaluation and certification component. In the event the work of Seller is delayed by reason of delay in the supply of Westinghouse-furnished Government material or in giving manufacturing releases, and such delay causes an increase in the time required for performance of this order, an equitable adjustment shall be made in the delivery schedule, and the order shall be modified in writing accordingly. Delay of the work by reason of delay in the supply of Westinghouse-furnished Government material or manufacturing release shall not result in an increase in the order price.

The delivery dates to Westinghouse are as follows:

<u>Item</u>	<u>Date of Delivery</u>
(Based on Seller's quoted dates)	

The Westinghouse supplied material dates to Seller are as follows:

<u>Item</u>	<u>Date of Delivery</u>
(Items listed here will be property enumerated in Attachment No. 5 to this inquiry.)	

The Seller's dates by which he shall complete manufacturing qualification for various components are as follows:

<u>Item</u>	<u>Date of Qualification</u>
(Items listed here will be fuel elements, subassemblies, clusters, and control rods.)	

(b) Seller shall within 30 days after the date of the contract, prepare and submit to Westinghouse for approval, a schedule showing the order in which the Seller proposes to carry on the work, the date on which it will begin the several operations (including procurement of materials and equipment) and the contemplated dates for completing same, Seller shall report the actual progress for each operation shown on the schedule at the end of each month or at such intervals as are directed by Westinghouse and shall immediately deliver to Westinghouse five copies of the progress report.

(c) Seller shall furnish sufficient forces, plant and equipment, and shall work such hours, including night shifts, overtime operations and Sunday and holiday work, as may be necessary to insure the prosecution of the work in accordance with the approved progress schedule.

(d) Failure of Seller to comply with the requirements of this Article may be a ground for determination by Westinghouse that Seller is endangering performance of this contract in accordance with its terms.

11. PAYMENTS

(a) Progress Payments, as requested by Seller and approved by Westinghouse, based on the percentage or stage of completion of work performed under this order will be made as the work progresses, at the end of each calendar month, or as soon thereafter as practicable, provided the total amount paid as progress payments shall not exceed the actual costs incurred by Seller for work under this order plus a prorata share of the estimated profit to cover the work completed. Value of materials, supplies, and subcontracted parts procured by Seller for the work shall be considered in determining the percentage or stage of completion. Seller shall submit a breakdown of percentage completion by component for each month billed and a forecast of anticipated completion and billing for the following month and the remainder of the fiscal year in a format acceptable to Westinghouse. Progress payments based on percentage or stage of completion may be made at more frequent intervals if approved by Westinghouse.

(b) In making such progress payments, 10% of the amount due, as approved by Westinghouse, shall be retained by Westinghouse until final completion and acceptance of all work required hereunder; provided however, that Westinghouse, at any time after 50% of such work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining progress payments in full.

(c) All material and work covered by progress payments made shall thereupon become the sole property of the Government, but this provision shall not be construed as relieving Seller from the sole responsibility for all materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the rights of Westinghouse to require the fulfillment of all the terms of the order.

(d) Upon completion and acceptance of all work required hereunder, the amount due Seller under the order will be paid upon the presentation of a properly executed invoice therefor, after Seller shall have furnished Westinghouse with a release, if required, in such form and with such exceptions as may be approved by Westinghouse, of all claims against Westinghouse and the Government arising under and by virtue of this order.

12. ASSIGNMENT

Neither this order nor any interest therein nor claim thereunder shall be assigned or transferred by Seller, except as expressly authorized in writing by Westinghouse. This order may be assigned by Westinghouse to the Government or any designee of the Government, provided that written notice thereof is given to Seller.

13. SUBCONTRACTING

Seller shall not subcontract any work nor permit lower-tier subcontracting of any work on any item to be supplied under this order without prior written approval of Westinghouse.

14. SECURITY AND CLASSIFICATION

- (a) (1) In the performance of the work under this order, Seller shall, in accordance with the Commission's security regulations and requirements, be responsible for safeguarding restricted data and other classified matter and protecting against sabotage, espionage, loss and theft, the classified documents, materials, equipment processes, etc., as well as such other material of high intrinsic or strategic value as may be in Seller's possession in connection with performance of work under this order. Seller shall, upon request of Westinghouse or upon completion or termination of this order transmit to Westinghouse any classified matter in the possession of Seller or any person under Seller's control in connection with performance of this order.
- (2) Seller agrees to conform to all security regulations and requirements of the Commission.
- (3) The term "Restricted Data" as used in this article, means all data concerning (i) design, manufacture, or utilization of atomic weapons; (ii) the production of special nuclear material; or (iii) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Atomic Energy Act of 1954.
- (4) Except as the Commission may authorize, in accordance with the Atomic Energy Act of 1954, Seller shall not permit any individual to have access to Restricted Data until the designated investigating agency shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual and the Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security. As used in this subparagraph, the term "designated investigating agency" means the United States Civil Service Commission or the Federal Bureau of Investigation, or both, as determined pursuant to the provisions of the Atomic Energy Act of 1954. Access to classified information other than Restricted Data shall not be granted unless the recipient possesses appropriate security clearance.
- (5) It is understood that disclosure of information relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any restricted data or any top secret, secret or confidential matter that may come to Seller or any person under Seller's control in connection with work under this order, may subject Seller, his agents, employees, and subcontractors to criminal liability under the laws of the United States (see the Atomic Energy Act of 1954, 68 Stat. 919). (See also Executive Order 10104 of Feb. 1, 1950, 15 F.R. 597).
- (6) Seller shall immediately submit a confidential report to Westinghouse whenever, for any cause, Seller has reason to believe that there is any act or danger of espionage or sabotage affecting any of the work under this order.
- (b) Except as otherwise authorized in writing by Westinghouse, Seller shall insert provisions similar to the foregoing in all lower-tier orders under this order.

(c) In the performance of work under this order, Seller shall assign classifications to all documents, material and equipment originated or generated by Seller in accordance with classification guidance furnished to Seller by Westinghouse or the Commission. Every subcontract and purchase order issued hereunder involving the origination or generation of classified documents, material or equipment, shall include a provision to the effect that in the performance of such subcontract or purchase order the subcontractor or supplier shall assign classifications to all such documents, material and equipment in accordance with classification guidance furnished to such subcontractor or supplied by Seller.

15. NONDISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this order, Seller agrees as follows:

(a) Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by Westinghouse setting forth the provisions of this nondiscrimination article.

(b) Seller will, in all solicitations or advertisements for employees placed by or on behalf of Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(c) Seller will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by Westinghouse, advising the said labor union or workers' representative of Seller's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) Seller will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the cognizant contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(e) Seller will comply with all provisions of Executive Order No. 10925 of March 6, 1961, and of the rules, regulations, and relevant orders of The President's Committee on Equal Employment Opportunity.

(f) In the event of Seller's non-compliance with the nondiscrimination clauses of this order or with any of the said rules, regulations, or orders, this order may be cancelled in whole or in part and Seller may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of The President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

(g) Seller shall include the provisions of the foregoing paragraphs (a) through (f), in every subcontract or purchase order unless exempted by rules, regulations, or orders of The President's Committee on Equal Employment Opportunity issued pursuant to Section 302 of Executive Order No. 10925 of March 6, 1961, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions, including sanctions for non-compliance. Provided, however, that in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, Seller may request the United States to enter into such litigation to protect the interests of the United States.

16. TERMINATION

(a) The performance of work under this order may be terminated, in whole, or from time to time in part by Westinghouse in accordance with this article. Termination of work hereunder shall be effected by delivery to Seller of a Notice of Termination specifying the extent to which performance of work under the order is terminated and date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination and except as otherwise directed by Westinghouse, Seller shall, (1) stop work under the order on the date and to the extent specified in the Notice of Termination; (2) place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portions of work under the order as may not be terminated; (3) terminate all orders and subcontracts to the extent that they relate to the performance of any work terminated by the Notice of Termination; (4) assign to Westinghouse, in the manner and to the extent directed by Westinghouse, all of the right, title and interest of Seller under the orders or subcontracts so terminated; in which case, the Government shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; (5) settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts subject to the approval or ratification of Westinghouse to the extent it may require, which approval or ratification shall be final for all the purposes of this article; (6) transfer title and deliver to Westinghouse in the manner, to the extent, and at the time, if any, directed by Westinghouse (i) the fabricated or unfabricated parts, work in process, completed work, supplies and other material produced as a part of, or required in connection with the performance of, the work terminated by Notice of Termination, and (ii) the completed or partially completed plans, drawings, information, and other property which, if the order had been completed, would be

furnished to Westinghouse; (7) use his best efforts to sell in the manner, to the extent, at the time, and at the price or prices directed or authorized by Westinghouse, any property of the types referred to in provision (6) of this paragraph; provided, however, that Seller (i) shall not be required to extend credit to any purchaser and (ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by Westinghouse, and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by Westinghouse to Seller under this order or shall otherwise be credited to the price or cost of the work covered by this order or paid in such other manner as Westinghouse may direct; (8) complete performance of such parts of the work as shall not have been terminated by the Notice of Termination; and (9) take such action as may be necessary or as Westinghouse may direct for protection and preservation of the property related to this order which is in the possession of Seller and in which Westinghouse or the Government has or may acquire an interest.

(c) After receipt of a Notice of Termination, Seller shall submit to Westinghouse its termination claim, in the form and with the certification prescribed by Westinghouse. Such claim shall be submitted promptly but not later than four (4) months from the effective date of termination. Upon failure of Seller to submit its termination claim within the time allowed, Westinghouse may determine, on the basis of information available to it, the amount, if any, due to Seller in respect to the termination and such determination shall be final. After Westinghouse has made a determination under this paragraph, it shall pay Seller the amount so determined.

(d) Subject to the provisions of paragraph (c), Seller and Westinghouse may agree upon the whole or any part of the amount or amounts to be paid to Seller by reason of the total or partial termination of work pursuant to this article, which amount or amounts may include a reasonable allowance for profit on work done and Westinghouse shall pay the agreed amount or amounts. Nothing in paragraph (e) of this article, prescribing the amount to be paid to Seller in the event of the failure of Seller and Westinghouse to agree upon the whole amount to be paid to Seller by reason of the termination of work pursuant to this article, shall be deemed to limit, restrict, or otherwise determine or effect the amount or amounts which may be agreed upon to be paid to Seller pursuant to this paragraph (d).

(e) In the event of the failure of Seller and Westinghouse to agree as provided in paragraph (d) upon the whole amount to be paid to Seller by reason of the termination of work pursuant to this article, Westinghouse, but without duplication of any amounts agreed upon in accordance with paragraph (d) shall pay to Seller the following amounts:

(1) For completed supplies accepted by Westinghouse (or sold or acquired as provided in paragraph (b) (7) above) and not theretofore paid for a sum equivalent to the aggregate price for such supplies computed in accordance with the price or prices specified in the order, appropriately adjusted for any saving of freight or other charges.

(2) In respect of the work terminated as permitted by this article, the total (without duplication of any items) of (i) the cost of such work, including initial costs and preparatory expenses allocable thereto, exclusive of any costs attributable to supplies paid or to be paid for under paragraph (e) (1) hereof; and (ii) the cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in paragraph (b) (5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by Seller prior to the effective date of the Notice of Termination of work under this order, which amounts shall be included in the cost on account of which payment is made under subdivision (1) above; and (iii) a sum equal to 2% of the part of the amount determined under subdivision (1) which represents the cost of articles and materials not processed by Seller, plus a sum equal to 8% of the remainder of such amount, but the aggregate of such sum shall not exceed 6% of the whole of the amount determined under subdivision (1) above, which amount for the purpose of this subdivision (iii) shall exclude any charges for interest on borrowing provided, however, that if it appears that Seller would have sustained a loss on the entire order had it been completed no profit shall be included or allowed under this subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss.

(3) The reasonable cost of settlement, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the order and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of the property allocable to this order. The total sum to be paid to Seller under subdivision (1) and (2) of this paragraph (e) shall not exceed the total order price reduced by the amount of payments otherwise made and as further reduced by the order price of work not terminated. Except for normal spoilage and except to the extent that Westinghouse or the Government shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to Seller as provided in paragraph (e) (1) and paragraph (e) (2) (i), the fair value as determined by Westinghouse of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to Westinghouse or to a purchaser pursuant to paragraph (b) (7).

(f) The obligation of Westinghouse to make any payments under this article shall be subject to deductions in respect of (1) all unliquidated advance or other payments on account theretofore made to Seller, (2) any claim which Westinghouse may have against Seller, in connection with this order and (3) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things retained by Seller, or sold, and not otherwise recovered by or credited to Westinghouse.

(g) If the termination hereunder be partial, prior to the settlement of the terminated portion of this order, Seller may file with Westinghouse a request in writing that an equitable adjustment be made in the price or prices specified in the order for the work in connection with the continued portion not terminated by the Notice of Termination, and the appropriate fair and reasonable adjustment shall be made in such price or prices.

(h) Westinghouse may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by Seller in respect to the terminated portion of the order, whenever in the opinion of Westinghouse the aggregate of such payments shall be within the amount to which Seller will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed upon or determined to be due under this article, such excess shall be payable by Seller to Westinghouse upon demand, together with interest computed at the rate of 6% per annum, for the period from the date such excess payment is received by Seller to the date on which such excess is repaid; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in Seller's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition.

(i) For the purpose of paragraph (c) and (e) hereof, the amounts of the payments to be made by Westinghouse to Seller shall be determined in conformity with the policies and principles set forth in Chapter 9112 of the AEC Manual in effect at the date of this order. Unless otherwise provided for in this order, or by applicable statute, Seller, for a period of three (3) years after final settlement under the order shall make available to Westinghouse and the Government at all reasonable times at the office of Seller but without direct charge to Westinghouse or the Government all its books, records, documents, or other evidence bearing on the costs and expenses of Seller under the order and in respect of the termination of work hereunder, or, to the extent approved by the Government, photographs, micro-photographs, or other authentic reproductions thereof.

17. DEFAULT

(a) Westinghouse may, subject to the provisions of paragraph (b) below, by written Notice of Default to Seller, terminate the whole or any part of this order in any one of the following circumstances; (i) if Seller fails to make delivery of the supplies or to perform the services within the time specified herein or any extension thereof, or (ii) if Seller fails to perform any of the other provisions of this order, or so fails to make progress as to endanger performance of this order in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of ten (10) days (or such longer period as Westinghouse may authorize in writing) after receipt of a formal notice from Westinghouse specifying such failure.

(b) Except with respect to defaults of lower-tier subcontractors, Seller shall not be liable for any excess costs if the failure to perform the order arises out of causes beyond the control and without the fault or negligence of Seller. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case, the failure to perform must be beyond the control and without the fault or negligence of Seller. If the failure to perform is caused by the default of a lower-tier subcontractor, and if such default arises out of causes beyond the control of both Seller and the lower-tier subcontractor, and without the fault or negligence of either of them, Seller shall not be liable for any excess costs for failure to perform, unless the supplies or services to be furnished by the lower-tier subcontractor were obtainable from

other sources in sufficient time to permit Seller to meet the required delivery schedule.

(c) In the event Westinghouse terminates this order in whole or in part as provided in paragraph (a) of this article, Westinghouse may procure, upon such terms and in such manner as Westinghouse may deem appropriate, supplies or services similar to those so terminated, and Seller shall be liable to Westinghouse for any excess costs for such similar supplies or services; provided, however, that Seller shall continue the performance of this order to the extent not terminated under the provisions of this article.

(d) If this order is terminated as provided in paragraph (a) of this article, Westinghouse, in addition to any other rights provided in this article, may require Seller to transfer title and deliver to Westinghouse, in the manner and to the extent directed by Westinghouse, (i) any completed supplies, and (ii) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing materials") as Seller has specifically produced or specifically acquired for the performance of such part of this order as has been terminated; and Seller shall, upon direction of Westinghouse, protect and preserve property in possession of Seller in which Westinghouse has an interest. Payment for completed supplies delivered to and accepted by Westinghouse shall be at the order price. Payment for manufacturing materials delivered to and accepted by Westinghouse and for the protection and preservation of property shall be in an amount agreed upon by Seller and Westinghouse. Failure to agree to such amount shall be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes".

(e) If, after notice of termination of this order under the provisions of paragraph (a) of this article, it is determined that the failure to perform this order is due to causes beyond the control and without the fault or negligence of Seller or lower-tier subcontractor pursuant to the provisions of paragraph (b) of this article, such Notice of Default shall be deemed to have been issued pursuant to the article of this order entitled "Termination", and the rights and obligations of the parties hereto shall, in such event, be governed by such article. (Except as otherwise provided in this order, this paragraph (e) applies only if this order contains such article.)

(f) The rights and remedies of Westinghouse provided in this article shall not be exclusive and are in addition to any other rights and remedies provided by law or under this order.

18. SUSPENSION OF WORK FOR THE CONVENIENCE OF WESTINGHOUSE

(a) Westinghouse may, by written notice, direct Seller to suspend all or any part of the work for such period of time as may be determined by Westinghouse to be necessary or desirable for its convenience. If such suspension unreasonably delays the progress of the work and causes additional expense or loss to Seller in the performance of the work, not due to the fault or negligence of Seller, an equitable adjustment in the price and the time for performance shall be made by agreement of the parties, and the order shall be modified in writing accordingly; provided, however, that any claim by Seller for an adjustment hereunder must be asserted within thirty (30) days from the date of a start order for resumption of

work. Failure to agree on an equitable adjustment under this article shall be deemed to be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes."

(b) The provisions of this article shall not apply to any suspension of work resulting from action taken by Westinghouse under any other provision of this order.

19. EXAMINATION OF RECORDS

(a) seller agrees that the Comptroller General of the United States or any of his duly authorized representatives shall have access to and the right to examine any directly pertinent books, documents, papers and records of Seller involving transaction related to this order until the expiration of three years after final payment under this order.

(b) Nothing in this order shall be deemed to preclude an audit by the General Accounting Office of any transaction under this order.

20. RENEGOTIATION

If this order is subject to the Renegotiation Act of 1951 as amended, the following provisions shall apply:

(a) This order is subject to the Renegotiation Act of 1951, as amended (P.L. 9, 82d Cong., 65 Stat. 7; P. L. 764, 83d Cong., 68 Stat. 1116; P. L. 216, 84th Cong., 69 Stat. 447; P. L. 870, 84th Cong., 70 Stat. 786; 86th Cong., 72 Stat. 1789; 86th Cong., 73 Stat. 210) and shall be deemed to contain all the provisions required by Section 104 of said Act.

21. DISPUTES

(a) Except as otherwise provided in this order, any dispute concerning a question of fact arising under this order which is not disposed of by agreement shall be decided by the Manager of the Commission's Pittsburgh Naval Reactors Office, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Seller. The decision of the Manager of the Commission's Pittsburgh Naval Reactors Office shall be final and conclusive unless within 30 days from the date of receipt of such copy, Seller mails or otherwise furnishes to the Manager of the Commission's Pittsburgh Naval Reactors Office a written appeal addressed to the Commission. The decision of the Commission or its duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this article, Seller shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, Seller shall proceed diligently with the performance of the order and in accordance with the decision of the Manager of the Commission's Pittsburgh Naval Reactors Office.

(b) This "Disputes" article does not preclude consideration of law questions in connection with decisions provided for in paragraph (a) above; Provided, that nothing in this order shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

22. PASSAGE OF TITLE

Title to all articles or work supplied under this order shall vest in the Government upon delivery to and acceptance by Westinghouse in accordance with the provisions of articles 9 and 10.

23. LIENS

Seller agrees to deliver to Westinghouse the articles covered by this order free and clear of all items, claims and encumbrances.

24. SAFETY, HEALTH, AND FIRE PROTECTION

Seller shall take all reasonable precautions in the performance of the work under this order to protect the health and safety of employees and of members of the public and to minimize danger from all hazards to life and property, and shall comply with all health, safety, and fire protection regulations and requirements (including reporting requirements) of the Commission and Westinghouse. In the event that Seller fails to comply with said regulations or requirements of the Commission or Westinghouse, Westinghouse may, without prejudice to any other legal or contractual rights of the Commission or Westinghouse, issue an order stopping all or any part of the work; thereafter a start order for resumption of work may be issued at the discretion of Westinghouse. Seller shall make no claim for an extension of time or for compensation or damages by reason of or in connection with such work stoppage.

25. SPECIAL TOOLING

(a) The term "special tooling" as used in this article, means all jigs, dies, fixtures, molds, patterns, special taps, special gauges, special test equipment, other special equipment and manufacturing aids, and replacements thereof acquired or manufactured by Seller for use in the performance of this order which are of such a specialized nature that, without substantial modification or alteration, their use is limited to the production of such supplies or parts hereof, or the performance of such services, called for by this order, as are peculiar to the needs of the Government and/or Westinghouse. The term does not include: (i) items of tooling or equipment heretofore acquired by Seller, or replacements thereof, whether or not altered or adapted for use in the performance of this order; (ii) consumable small tools; or (iii) general or special machine tools or similar capital items.

(b) Seller agrees not to use any items of special tooling except in the performance of this order, or except as otherwise provided by this article, without the prior written approval of Westinghouse. Seller may, with the approval of Westinghouse, use the special tooling in the performance of other contracts with the Government, or subcontracts under Government contracts, provided that

Seller agrees not to include in the price or prices for any such contracts or subcontracts, involving the use of such special tooling, the cost of such tooling or any allowance or charge to cover depreciation or amortization which has previously been charged against this order.

(c) As and when any substantial portion of usable special tooling is no longer needed by Seller for the performance of this order, and of other Government contracts and subcontracts as to which approval has been obtained under paragraph (b) above, Seller shall promptly notify Westinghouse thereof, and shall furnish to Westinghouse a list of the products, parts or services for the manufacture or performance of which such special tooling was used or designed. Upon completion or termination of all work under this order, or of this order and other Government contracts and subcontracts as to which approval has been obtained under paragraph (b) above, Seller shall furnish a final list in the same form covering all items not previously reported under this paragraph. Special tooling which has become obsolete as a result of changes in design or specification need not be reported, except as provided for in paragraph (d).

(d) In the event of any changes in design or specifications which affect interchangeability of parts, Seller shall, unless otherwise agreed to by Westinghouse, give Westinghouse notice of any part which is not interchangeable with the new or superseding parts and the usable special tooling for each part covered in such notice shall be retained by Seller subject to the provisions of paragraph (i), pending disposition under paragraph (f).

(e) At the time it furnishes any list or notice under (c) or (d) above, Seller may designate those items of special tooling (either specifically or by listing the particular products, parts or services for which such items were used or designed) which it desires to retain, together with a written offer; (i) to retain any or all of such items, free and clear of any Government interest, for an amount designated therein which should ordinarily not be less than the then fair value of such items (which fair value takes into account, among other things, the value of such items to Seller for use in further work by it); or (ii) to retain any or all such items for such period of time and subject to such terms and conditions as may be agreed to by the parties hereto, subject to ultimate retention or disposition of such items in accordance with paragraph (f) hereof.

(f) Within 90 days after receipt of any list or notices under paragraph (c) or (d) hereof, or such further period as may be agreed upon by the parties, Westinghouse shall furnish to Seller: (i) a list specifying the particular products, parts, or services for which the Government may require special tooling, together with a request that Seller transfer title (to the extent not previously transferred under any other article of this order) and deliver to Westinghouse all usable items of special tooling which were used or designed for the manufacture or performance of any designated portion of such products, parts, or services, and which were on hand when production of such products or parts, or performance of such services, ceased; or (ii) an acceptance or rejection of any offer made by the Seller under paragraph (e) above, or a request for further negotiation with respect thereto; or (iii) subject to the provisions of paragraph (j) thereof, a direction to Seller to sell, or to dispose of as scrap, for the account of Westinghouse, and or all of the special tooling

covered by such list; or (iv) a statement with respect to any or all of the special tooling covered by such list that Westinghouse has no further interest therein and waives its rights therein; or (v) any combination of the foregoing, as the circumstances warrant. Seller shall promptly comply with any request by Westinghouse under this paragraph to transfer title to any items of special tooling, and shall, subject to the provisions of paragraph (j) hereof,

(1) immediately prepare such items for shipment by proper packaging, packing, and marking in accordance with any instructions which may be issued by Westinghouse, and shall promptly deliver such items to Westinghouse, as directed by Westinghouse, or (2) if a storage agreement has been entered into, prepare such items for storage in accordance therewith, as directed by Westinghouse. Any items of special tooling so delivered or stored shall be accompanied by such operations or processes for which such items were used or designed. If Westinghouse has requested further negotiations under (ii) of this paragraph, Seller agrees that it will enter into such negotiations in good faith with Westinghouse. Any items of special tooling which are not disposed of by transfer of title and delivery to the Government and/or Westinghouse, or by acceptance of an offer of Seller made under paragraph (e), or of such offer as modified in the course of negotiations, shall be disposed of in the manner set forth in (iii) or (iv) of this paragraph.

(g) If Westinghouse accepts an offer of Seller to retain any items of special tooling, or if any such items are sold to third parties or disposed of as scrap, the net proceeds shall: (i) be deducted from the amounts due to Seller under this order and the order amended accordingly; or (ii) be otherwise paid as Westinghouse may direct.

(h) Seller agrees that it will follow its normal industrial practice in maintaining property control records on all the special tooling, and that it will make such records available for inspection by the Government and/or Westinghouse at all reasonable times. Seller further agrees that, to the extent practicable, it will identify by appropriate stamp, tag or other mark all special tooling subject to this article.

(i) Seller agrees that between the date any usable items of special tooling are no longer needed by it, within the meaning of this article, and the date of final disposition of such items under this article, it will take all reasonable steps necessary to maintain the identity and existing conditions of such items, unless Westinghouse has directed that such items be disposed of as scrap or has given notice under (f) (iv). Seller shall not be required to keep any such items in place.

(j) Any preparation of items for shipment required of Seller under paragraph (f) of this article, or any disposal as scrap under paragraph (f) of this article, or any disposal of scrap under paragraph (f) (iii), or any action required of Seller under paragraph (i), shall be taken pursuant to written instructions of Westinghouse, which shall (i) provide for an equitable adjustment of the order price to cover any additional cost to Seller not taken into account in the negotiation of this order, of complying with such instructions, which adjustment shall be made in accordance with the procedure set forth in the article of this order entitled "Changes", or (ii) otherwise provided for payments to Seller of any such additional cost. Any failure of Westinghouse to issue Seller specific

disposition instructions shall be construed as an instruction to Seller to take the action required under paragraph (i) with provision for equitable adjustment or payment as provided for above.

(k) Seller agrees that, in placing any subcontracts or purchase orders under this order which involve the use of special tooling, the full cost of which is charged to such subcontract or purchase order, it will include therein appropriate provisions to obtain rights comparable to those granted to the Government and Westinghouse by this article, and agrees that, it will exercise such rights for the benefit of the Government, as Westinghouse may direct.

26. NON-STANDARD TOOLING

Seller agrees to make available to Westinghouse or the Government without charge for a period of one year after delivery of the core, all non-standard tooling not specifically covered by the Special Tooling Article which is essential to the assembly or disassembly of the core.

27. WESTINGHOUSE FURNISHED GOVERNMENT MATERIAL

(a) General Terms Applicable to All Items in Article 27

(1) Title to furnished Government property shall remain in the Government. Title thereto shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such property, or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty. Seller shall maintain adequate property control records of such property consistent with good business practice and as may be prescribed by Westinghouse; and shall cause such property to be clearly marked (if not so marked) to show that it is property of the Government. Following successful completion of the order, certain materials or residues and scrap therefrom shall become the property of Seller. The conditions and terms of Seller's possession are specified in paragraph (b)(4), (j)(4), and (k)(3) of this Article 27. All other Government material remains in the title of the Government.

(2) Westinghouse will furnish to Seller analytical test and inspection records for property furnished. Based upon these test and inspection results or such additional tests and inspections as Seller may elect to make at its own expense, Seller shall advise Westinghouse in writing of its final acceptance of the property, provided, however, Seller shall be obligated to accept property which meets the specification requirements of the order. In the event Seller fails to notify Westinghouse as to acceptance or rejection (i) within (30) days of receipt of property and records, or (ii) prior to use of property other than acceptance testing, whichever occurs first, final acceptance shall be conclusively presumed, except as provided for fuel elements in paragraphs (f) and (g) of this Article 27. Any such furnished property which does not meet the specification requirements of the order will be replaced to Seller by Westinghouse in the form and condition required by the order specifications.

(3) After final acceptance by Seller, Seller shall be solely responsible for such property; shall bear all risks for subsequent rejection whether or not due to unknown or latent defects; and Westinghouse shall not be obligated to replace defective or rejectable property nor be liable for loss by reason of plant shutdown, non-operation or increased expense of operation or any other consequential loss or damage, except as provided for tools and equipment in paragraph (c) (3), fabricated components in paragraph (d) (3), and fuel elements in paragraphs (f) and (g) of this article 27.

(4) Seller shall in accordance with sound industrial practice, and without additional cost to Westinghouse, maintain in operating condition, if applicable, protect and preserve such furnished property until disposed of by Seller in accordance with this order.

(5) Seller upon delivery to it of the furnished property assumes the risk of, and shall be responsible for, any loss or destruction of or damage to such furnished property.

(6) Westinghouse and the Government shall at all times have access to the premises wherein such property is located.

(7) In the event that such items of furnished property are not delivered to Seller for use when needed, Westinghouse shall, if requested by Seller, determine if any delay has been occasioned Seller thereby, and if so shall grant a reasonable extension of the time for completion of performance. Westinghouse shall not be liable to Seller for damages or loss of profit by reason of any delay in delivery of said furnished property, except that in case of such delay, upon written request of Seller, an equitable adjustment shall be made in the delivery schedule of this order in accordance with the procedures provided for in the Changes Article. See also Article 10, Deliveries, of this order, for further details on material deliveries.

(8) Any additional property furnished by Westinghouse for any reason, other than replacement of Seller rejected Westinghouse furnished material, components or equipment, shall be supplied FOB point of shipment with freight charges for account of Seller. Charges for such property shall be collected by Westinghouse by credit against payments otherwise due Seller from Westinghouse.

(b) Core Structural Material

(1) Westinghouse will furnish core structural material as listed in Section 1.7 of Attachment No. 5, "List of Government Material, Components, and Equipment to be Supplied by Westinghouse for [REDACTED] Core Cartridge," at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. Such structural material shall not be used by Seller for development and evaluation work under the order, except where specifically required by order specifications.

(2) Structural material required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) By notice in writing, Westinghouse may decrease the property furnished or to be furnished by Westinghouse under this section (b). In any such case, Westinghouse upon the written request of Seller shall equitably adjust the delivery dates or the order price or both, and any other contractual provisions affected by the decrease, in accordance with the procedures provided for in the Changes Article of this order.

(4) Title to structural material furnished by Westinghouse shall remain in the Government, except that, upon delivery and acceptance of the core, title to all the residue of such structural material shall vest in Seller. All scrap generated from machining and fabrication of such structural material becomes the property of Seller upon delivery and acceptance of the core, and shall be disposed of at his expense.

(5) Although Westinghouse will not warrant furnished structural material for latent defects discovered after Seller's acceptance, Westinghouse will exert its best efforts to aid Seller in recourse against the original material supplier under any warranty which may be in force to the extent that it is enforceable.

(c) Tools and Equipment

(1) Westinghouse will furnish tools and equipment as listed in Section 3.0 of Attachment No. 5 at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) Tools and equipment required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) After acceptance by Seller, Seller shall be solely responsible for successful completion of all operations involving the use of Westinghouse furnished tools and equipment; provided however that Seller shall not warrant material, workmanship or design of such tools or equipment. If Seller can prove to the satisfaction of Westinghouse that a defect exists in the material, workmanship or design of Westinghouse furnished tools or equipment, Westinghouse, at no expense to Seller, will at Westinghouse's discretion either replace the supplied tools or equipment or cause them to be modified to correct such deficiency. Seller shall bear all risk for rejection of order components whether or not due to defects in the supplied tools or equipment. Westinghouse will not be liable for loss by reason of consequential loss or damage or increased expense of operation or any other consequential loss or damage for order components affected by operations involving Westinghouse supplied tools or equipment whether or not such loss, damage or increased expense arises from defects or any other aspects of Westinghouse furnished tools and equipment.

(d) Fabricated Components

(1) Westinghouse will furnish fully fabricated components as listed in Section 2.0 of Attachment No. 5 at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) Fabricated components required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) After final acceptance by Seller, Seller shall be responsible for successful installation per applicable order specifications of Westinghouse furnished fabricated components. Seller shall not warrant material, workmanship or design of such components. After final acceptance by Seller, Westinghouse will not be liable for loss by reason of plant shutdown, non-operation or increased expense of operation or any other consequential loss or damage arising from material, workmanship or design of Westinghouse furnished fabricated components, provided however that Westinghouse will at Westinghouse's discretion either replace or modify any defective Westinghouse furnished fabricated component at no cost to Seller if Seller can show to the satisfaction of Westinghouse that the defect is in material, workmanship or design.

(e) [REDACTED]

(1) Westinghouse will furnish [REDACTED] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) [REDACTED] in excess of the amount specified in Attachment No. 5 will be furnished by Westinghouse to Seller and Seller shall be charged [REDACTED]

(3) Seller shall be financially responsible for the value [REDACTED] not returned to Westinghouse. Seller shall be charged [REDACTED] as specified in paragraph (e)(4) below.

(4) All unused [REDACTED] partially processed, rejected, and scrap and residues therefrom, will be returned to Westinghouse as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(5) Seller agrees to segregate [REDACTED] material which is partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

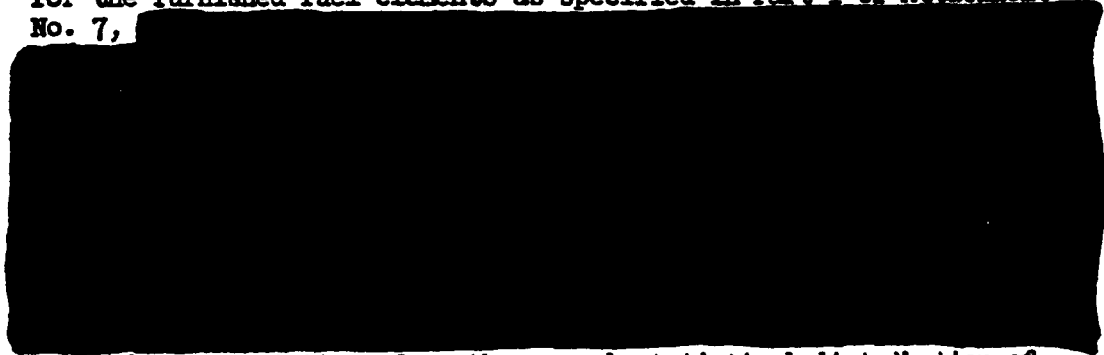
(f) Fuel and Poison [REDACTED]

(1) Westinghouse will furnish at no cost to Seller, FOB carrier, Seller's Plant, acceptable fuel and poison [REDACTED] identified in Part I of Attachment No. 7, [REDACTED], and in the following quantities:

<u>Element Type</u>	<u>Dwg. No.</u>	<u>Quantity</u>
[REDACTED]	949-D-039 Items 1,2,3,5 & 6	(Westinghouse will furnish all fuel and poison elements of the types listed for one core and spare components, the amounts to be based on the quantities quoted by Seller in his proposal. See Attachment No. 9.)
[REDACTED]	950-D-376 Item 1	
[REDACTED]	950-D-381 Item 1	
[REDACTED]	952-D-996	

Records and/or loading information for each element will be supplied by Westinghouse for use by Seller.

- (2) (1) Westinghouse shall furnish analytical, test and inspection records for the furnished fuel elements as specified in Part I of Attachment No. 7,



ments due to variations from the normal statistical distribution of these characteristics shall be replaced by Westinghouse at no cost to Seller in the form and condition in which originally to have been furnished provided rejection occurs prior to the processing stage beyond which Seller assumes responsibility for the rejectable quality characteristics as established in (2)(ii) below, and further provided that Seller furnishes satisfactory evidence, as determined by Westinghouse, that Seller has expended reasonable effort to pre-select such element for subsequent selective assembly.

If additional [redacted] Westinghouse will furnish them and Seller will be charged as follows [redacted]

<u>Element Type</u>	<u>Dwg. No.</u>	<u>Price</u>
[redacted]	949-D-039 Items 1, 2, 3, 5 & 6	**
[redacted]	950-D-376 Item 1	**
[redacted]	950-D-381 Item 1	**
[redacted]	952-D-996	**

(ii) In addition to replacing rejected fuel and poison [redacted], Westinghouse shall pay to Seller a fixed dollar amount for each fuel element rejected because of inherent or latent defects in accordance with Attachment No. 8, "Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel [redacted] and in accordance with the terms and conditions herein set forth.

**Westinghouse will specify prices at the time of order placement.



[REDACTED]

(A) Payments to Seller for rejection of fuel [REDACTED] the contract quality requirements for [REDACTED]

[REDACTED]

shall be made at the respective prices set forth in Attachment No. 8, provided Seller satisfactorily inspects for these characteristics in accordance with the inspection method listed, upon receipt of fuel [REDACTED] prior to performing work on such elements. Seller shall assume responsibility for such characteristics with respect to those elements not rejected as a result of such inspection. Any subsequent rejection for these characteristics after acceptance by Seller shall be Seller's risk.

(B) Payments to Seller for rejection of fuel [REDACTED] because of failure to meet order quality requirements [REDACTED] shall be made at the prices set forth in Attachment No. 8; provided Seller satisfactorily tests and inspects the element [REDACTED] prior to final machining, in accordance with the order requirements. Any subsequent rejection of subassemblies and clusters [REDACTED] shall be Seller's risk.

(C) Payments to Seller for rejection of fuel [REDACTED] shall be made at the prices set forth in Attachment No. 8; provided Seller has satisfactorily inspected and tested at each prior processing stage in accordance with the inspection methods listed; and further provided that the elements have been processed in accordance with the process sequence established in Attachment No. 8. Payments shall be made at the price indicated for the processing stage at which rejection should have been determined. Any rejection of sub-assemblies and clusters containing elements [REDACTED] shall be Seller's risk.

(iii) Any payments due Seller in accordance with provisions of this subparagraph (f)(2) of this Article 27 shall be reflected in an increase in total order price and shall be effected by a change notice to the order.

The provisions of this subparagraph (f)(2) of this Article 27 shall in no way relieve Seller from responsibility for complying with all requirements of the drawings, specifications and other provisions of this order, provided however that Seller is not responsible for defects in the areas (A), (B), (C), (D), and (E) enumerated hereunder if Seller can show that such defects were not caused by Seller's processing:

- (A) Chemical composition
- (B) Mechanical properties
- (C) Corrosion properties
- (D)

- (E) Fuel and poison

Except for fuel and poison Seller shall be responsible that elements meet the quality requirements of this order. Acceptance of responsibility for quality of elements by Seller shall be conclusively presumed to have occurred coincident with performance of any additional work by Seller which alters the elements in any manner with respect to the form or quality in which the acceptance inspection occurred.

(3) All unused fuel and poison processed, rejected, and scrap and residues therefrom, except Zircaloy, will be returned to Westinghouse or otherwise disposed of as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(4) Seller agrees to segregate the furnished Source and Special Nuclear material as well as such materials which are partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

(5) Special measures will be taken by Seller in the protection of and accounting for all Source and Special Nuclear Materials furnished by Westinghouse for the performance of this order, in accordance with the regulations and requirements of the Commission.

(6) Seller is financially responsible for value of any enriched special nuclear material, and shall be charged at the rate which is not returned to Westinghouse as either finished product or recoverable scrap or is not disposed of as non-recoverable scrap as hereinafter provided. Seller shall pack and ship recoverable scrap as directed by Westinghouse with freight charges for the account of Westinghouse. Seller shall dispose of non-recoverable scrap at his own expense as directed by Westinghouse. Non-recoverable scrap shall be that waste material which the Commission determines uneconomic to reprocess for recovery of SS Material. Recoverable scrap shall be that waste material which the Commission desires to reprocess for recovery of SS Material.

(7) Notwithstanding the provisions of Article 27, Disputes, of this contract, the following provisions and procedures shall apply to the determination and resolution of measurement differences resulting from such determination, with respect to special nuclear material for which Seller is financially responsible. For the purpose of this article, the terms "shipper" and "receiver" shall refer to Seller and to Westinghouse of the Government, as the case may be.

* If the receiver does not accept the shipper's measurements stated on the AEC transfer form for such material, the receiver shall submit a notice of disagreement in writing to the shipper. The notice of disagreement shall include measurement data supporting the disagreement.

If the disagreement is not resolved by mutual agreement, the following procedures shall apply:

(i) An umpire mutually acceptable to Seller and Westinghouse shall be selected and submitted to the Commission for approval. If, within 30 days after receipt of the notice of disagreement, the parties have not agreed to the selection of an umpire, then Westinghouse may appoint an umpire after obtaining Commission approval. Notification of such appointment shall be given the Seller in writing. Westinghouse shall contract for the services of the umpire.

(ii) The parties agree to furnish to the umpire, within 15 days after request received in writing from him, such information or samples as he may require to make his determination.

(iii) The umpire shall make his determination and findings in writing, and furnish a copy thereof to both parties. The umpire's results will be conclusive on both parties.

(iv) The party whose original measurement is furthest from the umpire's result will bear the umpire's charges; provided in the event the umpire's result is equidistant between the shipper's and receiver's original measurement, the parties will each bear one half of the umpire's charges. Any expenses of Seller, as determined herein, shall be paid by Seller by credit against amounts payable to Seller by Westinghouse under this order.

(g) Fuel and Poison

(1) Westinghouse will furnish at no cost to Seller, FOB carrier Seller's Plant, acceptable fuel and poison identified in Part II, Attachment No. 7, and in the following quantities:

<u>Element Type</u>	<u>Dwg. No.</u>	<u>Subassembly and Cluster Qualification Quantity</u>
[REDACTED]	949-D-039,, Items 1, 2, 3, and 4	(Westinghouse will furnish all fuel and poison elements of the types listed for sub-assembly and qualification on this order, the amounts to be based on the quantities quoted by Seller in his proposal. (See Attachment No. 9.)
[REDACTED]	950-D-376, Item 1	
[REDACTED]	950-D-381, Item 1	

Records and/or loading information for each element will be supplied by Westinghouse for use by Seller.

(2)(i) Westinghouse shall furnish analytical, test and inspection records for the furnished fuel elements as specified in Part II of Attachment No. 7.

[REDACTED] of the order due to inherent defects in elements furnished by Westinghouse, shall be replaced by Westinghouse at no cost to Seller in the form and condition in which originally to have been furnished provided that rejection occurs prior to the element processing stage beyond which Seller assumes responsibility for the rejectable quality characteristics as established in (2)(ii) below.

Any fuel or poison

[REDACTED] and which element may prevent Seller from meeting contract quality requirements due to variations from the normal statistical distribution of these characteristics shall be replaced by Westinghouse at no cost to Seller in the form and condition in which originally to have been furnished provided rejection occurs prior to the processing stage beyond which Seller assumes responsibility for the rejectable quality characteristics as established in (2)(ii) below, and further provided that Seller furnishes satisfactory evidence, as determined by Westinghouse, that Seller has expended reasonable effort to pre-select such element for subsequent selective assembly.

[redacted] Westinghouse will furnish them and Seller will be charged as follows for each additional plate:

<u>Element Type</u>	<u>Dwg. No.</u>	<u>Price</u>
[redacted]	949-D-039, Items 1, 2, 3, & 4	**
[redacted]	950-D-376 Item 1	**
[redacted]	950-D-381 Item 1	**

(ii) In addition to replacing rejected fuel or poison [redacted] Westinghouse shall pay to Seller a fixed dollar amount for each element rejected because of inherent or latent defects in accordance with Attachment No. 8, "Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel [redacted] and in accordance with the terms and conditions herein set forth.

(A) Payments to Seller for rejection of fuel [redacted] the contract quality requirements for [redacted]



shall be made at respective prices set forth in Attachment No. 8, provided Seller satisfactorily inspects for these characteristics in accordance with the inspection method listed, upon receipt of fuel [redacted] prior to performing work on such elements. Seller shall assume responsibility for such characteristics with respect to those elements not rejected as a result of such inspection. Any subsequent rejection for these characteristics after acceptance by Seller shall be Seller's risk.

(B) Payments to Seller for rejection of fuel [redacted] shall be made at the prices set forth in Attachment No. 8; provided Seller satisfactorily tests and inspects the element [redacted] prior to final machining, in accordance with the order requirements. Any subsequent rejection of subassemblies and clusters [redacted] shall be Seller's risk.

** Westinghouse will specify prices at the time of order placement.



(C) Payments to Seller for rejection of fuel [REDACTED]

[REDACTED] shall be made at the prices set forth in Attachment No. 8; provided Seller has satisfactorily inspected and tested at each prior processing stage, in accordance with the inspection methods listed; and further provided that the elements have been processed in accordance with the process sequence established in Attachment No. 8. Payments shall be made at the price indicated for the processing stage at which rejection should have been determined. Any rejection of subassemblies and clusters containing elements [REDACTED] shall be Seller's risk.

(iii) Any payments due Seller in accordance with provisions of this subparagraph (g)(2) of this Article 27 shall be reflected in an increase in total order price and shall be effected by a change notice to the order.

The provisions of this subparagraph (g)(2) of this Article 27 shall in no way relieve Seller from responsibility for complying with all requirements of the drawings, specifications and other provisions of this order, provided however that Seller is not responsible for defects in the areas (A), (B), (C), (D), and (E) enumerated hereafter if Seller can show that such defects were not caused by Seller's processing:

- (A) Chemical composition [REDACTED]
- (B) Mechanical properties [REDACTED]
- (C) Corrosion properties [REDACTED]
- (D) [REDACTED]

(E) Fuel [REDACTED]
Except for fuel and poison [REDACTED]
[REDACTED] Seller shall be responsible that fuel and poison [REDACTED]

[REDACTED] Acceptance of responsibility for quality of elements by Seller shall be conclusively presumed to have occurred coincident with performance of any additional work by Seller which alters the elements in any manner with respect to the form or quality in which the acceptance inspection occurred.

(3) All unused fuel elements, as well as such materials which are partially processed, rejected, and scrap and residues therefrom, except Zircaloy, will be returned to Westinghouse, or otherwise disposed of, as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(h) Fuel [REDACTED]

(1) Westinghouse will furnish fuel [REDACTED] at no cost to Seller, FOB carrier, Seller's plant, freight prepaid.

(2) [REDACTED]

to the specification of the originally supplied material by a Westinghouse approved source. Westinghouse reserves the right to select the option for supply of additional material.

(3) Seller is financially responsible for value of any special nuclear material, and shall be charged at a rate [REDACTED] which is not returned to Westinghouse as either finished product or recoverable scrap or is not disposed of as nonrecoverable scrap as hereinafter provided. Seller shall pack and ship recoverable scrap as directed by Westinghouse with freight charges for the account of Westinghouse. Seller shall dispose of nonrecoverable scrap at his own expense as directed by Westinghouse. Nonrecoverable scrap shall be that waste material which the Commission determines uneconomic to reprocess for recovery of SS Material. Recoverable scrap shall be that waste material which the Commission desires to reprocess for recovery of SS Material.

(4) Paragraph (f)(7) of this article 27 also applies to material furnished per this paragraph (h).

(5) All unused fuel [REDACTED] partially processed, rejected, and scrap and residues therefrom, except Zircaloy, will be returned to Westinghouse or otherwise disposed of as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(6) Seller agrees to segregate the furnished Source and Special Nuclear Material as well as such materials which are partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

(i) Fuel [REDACTED]

(1) Westinghouse will furnish fuel [REDACTED] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. [REDACTED]

[REDACTED]

(2) If additional [REDACTED] approved by Westinghouse to the required specifications, and at Seller's expense.

[REDACTED]

(3) [REDACTED] All scrap will be disposed of by Seller at Seller's expense. No payment will be made to Seller for particles returned except for transportation costs.

(4) Seller agrees to segregate [REDACTED] partially processed and scrap and residues therefrom, and to further maintain them separate from other materials in Seller's possession.

(j) [REDACTED]

(1) Westinghouse will furnish [REDACTED] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

[REDACTED]

[REDACTED]

(3) Seller shall at all times [REDACTED] segregate the different types and further segregate it from other materials. Seller shall maintain segregation for this material in partially processed, rejected, and scrap and residue forms.

(4) Title [REDACTED] shall remain in the Government, except that, upon delivery and acceptance of the core, title to all the residue of such material shall vest in Seller. All scrap generated from fabrication of such material becomes the property of Seller upon delivery and acceptance of the core, and shall be disposed of at his expense.

(k) [REDACTED]

(1) Westinghouse will furnish [REDACTED] at no cost to Seller, FOB carrier, Seller's plant, freight prepaid.

[REDACTED]

(3) Title [REDACTED] shall remain in the Government, except that, upon delivery and acceptance of the core, title to all the residue of such material shall vest in Seller. All scrap generated from machining and fabrication of such material becomes the property of Seller upon delivery and acceptance of the core, and shall be disposed of at his expense.

28. MODULE TESTING AND INSTRUMENTATION CALIBRATION

(a) The first [redacted] modules and certain instrumented components are to be returned to Westinghouse for testing and calibration in accordance with Attachment No. 6, "Special Requirements for Module Testing and Instrumentation Calibration."

(b) Shipment to Westinghouse shall be made FOB carrier, Bettis Plant, West Mifflin, Pennsylvania, with freight collect for the account of Westinghouse. Seller shall not be liable for any loss or destruction of or damage to the components while in the possession of Westinghouse. The components will be returned at no cost to Seller, FOB carrier, Seller's plant, freight prepaid. Seller must reinspect the components and based upon such inspection Seller shall advise Westinghouse in writing of its final acceptance; provided, however, Seller shall be obligated to accept the components meeting the specification requirements (and any defects which were previously approved by Westinghouse) of the order. In the event Seller fails to notify Westinghouse as to acceptance or rejection within 30 days of receipt of individual components and records, final acceptance shall be conclusively presumed. In all cases, the Westinghouse furnished containers shall be used for shipping.

(c) Seller shall provide the components to Westinghouse in such time as to allow Westinghouse at least 100 days for module testing and/or 30 days for instrumentation calibration and return to Seller without causing delay in Seller's manufacturing schedule.

29. WORK ON WESTINGHOUSE, GOVERNMENT OR OTHER PREMISES

(a) As to the work to be done, or services to be performed by Seller on Westinghouse premises, Government premises, or the premises of other Westinghouse subcontractors, the Seller assumes entire responsibility and liability for losses, expenses, damages, demands, and claims in connection with or arising out of any injury or alleged injury (including death), or damage or alleged damage to property, sustained or alleged to have been sustained in connection with or to have arisen out of performance of the work. Seller will indemnify and save harmless the Government and Westinghouse from and against any and all claims, demands, actions, causes of action, suits, damages, expenses (including attorney's fees) and liabilities whatsoever resulting from or arising in any manner on account of or by reason of any injury to or death of any person or any damage to or loss of property which may occur or be alleged to have occurred as a result of or in connection with the performance of this order, whether or not resulting from the negligence of Westinghouse or the Government.

(b) Seller shall procure or cause to be procured at its own expense, and shall likewise maintain or cause to be maintained, while any work is being done by Seller or any of its subcontractors under this order, insurance sufficient to protect Seller, Westinghouse and the Government against all liability with respect to bodily injury or death, or property loss or damage, which may be imposed by law upon Seller or which is assumed by Seller under this order. Such insurance shall be in such amounts, with such companies, and on such forms as are satisfactory to Westinghouse, and shall provide for at least thirty (30) days prior written notice to Westinghouse of cancellation thereof. All such policies of insurance shall contain a clause reading substantially as follows: "The insurer waives any right to subrogation against Westinghouse Electric Corporation or the United States of America which might arise by reason of any payment under

[REDACTED]

this policy." Certificates of such insurance shall be furnished to Westinghouse, upon request, and Westinghouse's approval of such insurance shall be obtained prior to the commencement of any such work by or for Seller.

- (c) Seller agrees to comply with all applicable laws, rules and regulations with respect to workman's compensation or occupational disease, or withholding and payment of social security and federal income taxes, and to obtain similar agreements from all of its subcontractors; and Seller further agrees to indemnify Westinghouse and the Government against, and to save and hold harmless Westinghouse and the Government from, any and all liability and expense with respect to claim against Westinghouse or the Government which may result from failure or alleged failure of Seller or of any of its subcontractors to comply therewith.
- *

30 NUCLEAR HAZARDS INDEMNITY

Effective September 30, 1958, there was added to Contract No. AT-11-1-GEN-14 between Westinghouse and the Commission, the Commission's approved form of contract article extending "Nuclear Hazards Indemnity" as authorized by the Price-Anderson Act (Section 170 of the Atomic Energy Act of 1954, as amended). This article, in accordance with its terms, indemnifies Westinghouse and other persons indemnified against claims for public liability, up to \$500,000,000 in the aggregate, resulting from the occurrence of a nuclear incident as those terms are defined in the contract article. The extension of coverage to "other persons indemnified" means that the Commission indemnifies, in accordance with the provisions of the article, persons other than Westinghouse who may be liable for public liability for a nuclear incident which takes place at a contract location, as defined in the article or involves products (including design and other technical data) furnished or delivered under Contract No. AT-11-1-GEN-14.

31. COMPLIANCE WITH LAWS, REGULATIONS AND REQUIREMENTS

(a) Walsh-Healey Public Contracts Act

To the extent that this order is subject to the Walsh-Healey Public Contracts Act, as amended (41 U. S. Code 35-45), there are hereby incorporated by reference and representations and stipulations required by said Act and regulations issued thereunder by the Secretary of Labor such representations and stipulations being subject to all applicable rulings and interpretations of the Secretary of Labor which are now or may hereafter be in effect.

(b) Eight-Hour Law

- This order, to the extent that it is of a character specified in the Eight-Hour Law of 1912, as amended (40 U. S. Code 324-326) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. Code 35-45), is subject to the following provisions and exceptions of said Eight-Hour Law of 1912 as amended, and to all other provisions and exceptions of said Law:
- *

- (1) No laborer or mechanic doing any part of the work contemplated by this order, in the employ of Seller or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than

eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this article. The wages of every laborer and mechanic employed by Seller or any subcontractor engaged in the performance of this order shall be computed on a basic day rate of eight hours per day and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at no less than one and one-half times the basic rate of pay. For each violation of the requirements of this article a penalty of five (\$5.00) dollars shall be imposed for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this article, and all penalties thus imposed shall be withheld for the use and benefit of the Government.

(c) Notice of Labor Disputes

Whenever an actual or potential labor dispute is delaying or threatens to delay the performance of the work Seller shall immediately notify Westinghouse in writing. Such notice shall include all relevant information concerning the dispute and its background.

(d) Convict Labor

In connection with the performance of work under this order Seller shall not employ any person undergoing sentences of imprisonment at hard labor.

(e) Covenant Against Contingent Fees

Seller warrants that no person or selling agency has been employed or retained to solicit or secure this order upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by Seller for the purpose of securing business. For breach or violation of this warranty Westinghouse or the Government shall have the right to annul this order without liability or in its discretion to deduct from the order price or consideration or otherwise recover the full amount of such commission, percentages, brokerage, or contingent fee.

(f) Officials Not to Benefit

No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this order or to any benefit that may arise therefrom but this provision shall not be construed to extend to this order if made with a corporation for its general benefit.

(g) Buy American Act

(1) In acquiring end products, the Buy American Act (41 U. S. Code 10 a-d) provides that the Government give preference to domestic source end products. For the purpose of this article:

(i) "Components" means those articles, materials, supplies, which are directly incorporated in the end products;

(ii) "End products" means those articles, materials, and supplies, which are to be acquired under this order for public use; and

(iii) A "domestic source end product" means (A) an unmanufactured end product which has been mined or produced in the United States and (B) an end product manufactured in the United States if the cost of the components thereof which are mined, produced, or manufactured in the United States exceeds 50 percent of the costs of all its components. For the purpose of this (1) (iii) (B), components of foreign origin of the same type or kind as the products referred to in (2) (ii) or (iii) of this article shall be treated as components mined, produced, or manufactured in the United States.

(2) Seller agrees that there will be delivered under this order only domestic source end products, except end products:

(1) Which are for use outside the United States;

(ii) Which the Government determines are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality;

(iii) As to which the cognizant Government agency determines the domestic performance to be inconsistent with the public interest; or

(iv) As to which the cognizant Government agency determines the cost to the Government to be unreasonable.

(The foregoing requirements are administered in accordance with Executive Order No. 10582 dated December 17, 1954.)

(h) Reporting of Royalties

If any royalty payments are directly involved in the order or are reflected in the order price, Seller agrees to report in writing to Westinghouse during the performance of this order and prior to its completion or final settlement the amount of any royalties or other payments paid or to be paid by it directly to others in connection with the performance of this order together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit identification to the patents or other basis on which the royalties are to be paid. The approval of Westinghouse of any individual payments or royalties shall not estop the Government at any time from contesting the enforceability, validity or scope of, or title to, any patent under which a royalty or payments are made. If no royalties or other payments are paid directly to others, Seller agrees so to report in writing to Westinghouse prior to the completion or final settlement of this order.

(i) Permits

Except as otherwise directed by Westinghouse, Seller shall procure all necessary permits or licenses and abide by all applicable laws, regulations, and ordinances of the United States and of the State, territory, and political subdivision in which the work under this order is performed.

32. REPORTS

Seller shall submit full and current reports of all work done and the results thereof in the manner, at the times, and to the extent set forth in the order; provided that, unless otherwise specified in the order, Seller shall submit such reports in triplicate from time to time as requested and upon completion (or earlier termination) of the work.

33. PUBLIC RELEASE OF INFORMATION

All public releases of information and data relating to the work under this order which Seller desires to release or publish shall be submitted to Westinghouse for clearance by Westinghouse.

34. COPYRIGHT

(a) Seller agrees that the Commission shall determine the disposition of the title to and the rights under any copyright secured by Seller or its employees on copyrightable material first produced or composed and delivered to Westinghouse under this order. Seller agrees to and does hereby grant to the Government and Westinghouse on behalf of the Government and to their officers, agents, and employees acting within the scope of their official duties, a royalty free, nonexclusive and irrevocable license throughout the world to reproduce, translate, publish, use and dispose of and to authorize others so to do, all copyrightable work not first produced or composed by Seller in the performance of this order but which is incorporated in the material furnished under the order; provided, that such license shall be only to the extent Seller now has, or prior to the completion or final settlement of the order may acquire the right to grant such license without becoming liable to pay compensation to others solely because of such grant.

(b) Seller agrees that it will not include any copyrighted material in any written or copyrightable material furnished or delivered under this order without a license as provided for in paragraph (a) of this article, or without the consent of the copyright owner, unless specific written approval of the Commission to the inclusion of such copyrighted material is requested.

35. RIGHTS IN DRAWINGS, DESIGNS, SPECIFICATIONS, ETC.

(a) All drawings, sketches, designs, design data, specifications, notebooks, technical and scientific data, and all photographs, negatives, reports, findings, recommendations, data and memoranda of every description relating thereto, as well as all copies of the foregoing relating to the work or any part thereof including such of the foregoing as are furnished to Seller by Westinghouse and those prepared, developed or furnished by Seller in the course of, in connection with or under the order, shall be subject to inspection by Westinghouse or the Government at all reasonable times (for which inspection the proper facilities shall be afforded by Seller and its subcontractors), shall be the property of the Government and may be used by the Government for any purpose whatsoever without any claim on the part of Seller and its subcontractors and vendors for additional compensation and shall be delivered to Westinghouse, or otherwise disposed of by Seller either as Westinghouse may from time to time direct during the progress of the work or in any event as Westinghouse shall direct upon completion or termination of this order. Provided, however that any and

all such matters relating to novel manipulative techniques and processes which are not patentable inventions shall be the property of Seller, subject to the right of the Government to use and have used such techniques and processes for Governmental purposes; and provided further, however, that any knowledge or information relating to such techniques and processes which is proprietary to Seller and is so designated in writing by Seller at the time of disclosure thereof to Westinghouse shall not be disclosed to others by Westinghouse or the Commission, except that the Commission may, notwithstanding the foregoing, at any time disclose to others: (1) such knowledge or information necessary in the opinion of the Commission to performance by such others of contracts with the Commission or of subcontracts under such contracts; (2) such knowledge or information obtained by the Commission from sources (including other agencies of the Government) to whom Seller has not disclosed such knowledge or information; (3) such knowledge or information already in the possession of the Commission prior to disclosure thereof by Seller; and (4) such knowledge or information as may be in the public domain otherwise than as a consequence of a breach of the obligation herein undertaken to maintain such information in a confidential status.

(b) Subject to the security and patent provisions of this order, Seller shall be permitted to retain copies of material referred to in Section (a) of this Article. Use of such material and information, except matters relating to those proprietary techniques and processes designated in writing by Seller as provided for in Section (a) hereof, is restricted to the use by Seller, its subcontractors and vendors in connection with the work under this order and, unless prior written approval is obtained from Westinghouse, Seller, its subcontractors and vendors shall not, at any time during or after performance of this order, (1) use any of said Government-owned material or information in the design, manufacture, production, evaluation, testing or sale of equipment or supplies of the kind specified to be delivered under this order, or of any component parts thereof, or of any model of any such equipment, supplies or component part, or (2) transfer copies of, or otherwise disclose, to others (including corporate affiliates of Seller, its subcontractors and vendors) any of said Government-owned material or information. Except as authorized in writing by Westinghouse, Seller shall insert provisions in all subcontracts and purchase orders hereunder which will limit the use and transfer of Government-owned material and information in accordance with the requirements of this Section (b). With respect to those proprietary techniques and processes designated in writing by Seller as provided for in Section (a) hereof, Seller shall not at any time during or after the performance of this order disclose to others (including corporate affiliates of Seller, its subcontractors and vendors), or permit such others to use, any of said techniques or processes unless prior written approval is obtained from Westinghouse.

36. PATENT RIGHTS

(a) Whenever any invention or discovery is made or conceived by Seller or its employees in the course of or under this order, Seller shall furnish Westinghouse for transmission to the Commission complete information thereon; and the Commission shall have the sole power to determine whether or not and where a patent application

shall be filed, and to determine the disposition of the title to and the rights under any application or patent that may result. The judgment of the Commission on these matters shall be accepted as final; and Seller for itself and for its employees agrees that the inventor or inventors will execute all documents and do all things necessary or proper to carry out the judgment of the Commission.

(b) No claim for pecuniary award or compensation under the provisions of the Atomic Energy Acts of 1946 and 1954 shall be asserted by Seller or its employees with respect to any invention or discovery made or conceived in the course of, or under this order.

(c) Except as otherwise authorized in writing by the Commission, Seller will obtain patent agreements to effectuate the purposes of paragraphs (a) and (b) of this Article from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will not have access to technical data.

(d) Except as otherwise authorized in writing by the Commission, Seller will insert in all subcontracts provisions making this Article applicable to the subcontractor and its employees.

37. PATENT CLEARANCE FOR RELEASE OF UNCLASSIFIED TECHNICAL MATERIAL

It is recognized that during the course of the work hereunder or subsequent thereto, Seller or its employees may from time to time desire to publish, within the limits of security requirements, information regarding technical or scientific developments arising in the source of the order. In order that public disclosure of such information will not adversely affect the patent interests of the Government, patent approval for release shall be secured from Westinghouse prior to any such publication.

38. PATENT INDEMNITY

Seller agrees to indemnify Westinghouse and the Government, their officers, agents, servants and employees against liability of any kind (including costs and expenses incurred) for the use of any invention or discovery and for the infringement of any United States Letter Patent (not including liability arising pursuant to Section 183, Title 35 (1952), U. S. Code, prior issuance of Letters Patent) occurring in the performance of this order or arising by reason of the use or disposal by or for the account of the Government of items manufactured or supplied under this order, except, however, any infringement necessarily resulting from Seller's compliance with written specifications or provisions for other than standard parts or components manufactured or supplied by Seller or resulting from specific written instructions given by the Government or Westinghouse for the purpose of directing a manner of performance of the order not normally utilized by Seller.

39. NOTICE AND ASSISTANCE REGARDING PATENT INFRINGEMENT

(a) Seller shall report to Westinghouse, promptly and in reasonable written detail, each notice or claim for patent infringement based on the performance of this order of which Seller has knowledge.

(b) In the event of any suits against Westinghouse or the Government, or any claim against Westinghouse or the Government made before suit has been instituted, on account of any alleged patent infringement arising out of the performance of this order or out of the use of any supplies furnished or work or services performed hereunder, Seller shall furnish to Westinghouse or the Government upon request, all evidence and information in possession of Seller pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except in those cases in which Seller has agreed to indemnify Westinghouse and the Government against the claim being asserted.

40. SMALL BUSINESS AND LABOR SURPLUS AREA SUBCONTRACTING PROGRAM

(a) Seller agrees to establish and conduct a program to afford small business concerns and labor surplus area concerns an equitable opportunity to compete for subcontracts within their capabilities. In this connection, Seller shall:

(1) Designate a liaison officer, who will (i) maintain liaison with Westinghouse and SEA on small business matters and with duly authorized representatives of the Government on labor surplus area matters, (ii) supervise compliance with the "Utilization of Small Business Concerns," and "Utilization of Concerns in Labor Surplus Areas" clauses, and (iii) administer Seller's Small Business and Labor Surplus Area Program. (If deemed necessary, separate liaison officers may be appointed for small business matters and for labor surplus area matters);

(2) Provide adequate and timely consideration of the potentialities of small business concerns and labor surplus area concerns in all "make-or-buy" decisions;

(3) Assure that small business concerns and labor surplus area concerns will have an equitable opportunity to compete for subcontracts, particularly by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of small business concerns and labor surplus area concerns;

(4) Maintain records showing (i) whether each prospective subcontractor is a small business concern and (ii) procedures which have been adopted to comply with the policies set forth in this clause;

(5) Include the "Utilization of Small Business Concerns" and "Utilization of Concerns in Labor Surplus Areas" clauses in subcontracts which offer substantial small business or labor surplus area subcontracting opportunities; and

(6) Submit such information on subcontracting to small business concerns and labor surplus area concerns as is called for by Westinghouse.

(b) A "small business concern" is a concern that (1) is certified as a small business concern by the Small Business Administration, or (2) is independently owned and operated, is not dominant in its field of operation and, with its affiliates, employs either not more than 500 employees or, if the concern qualifies as a labor surplus area concern, not more than 625 employees.

(c) A "labor surplus area concern" is a concern which will perform, or cause to be performed, a substantial proportion of any contract awarded to it in "Areas of Substantial Labor Surplus" (also called "Areas of Substantial Unemployment"); so designated by the Department of Labor. A concern shall be deemed to perform a substantial proportion of a contract in a labor surplus area if the costs that the concern will incur on account of manufacturing or production performed in persistent or substantial labor surplus areas (by itself or its first-tier subcontractors) amount to more than 50 percent of the price of such order.

(d) Seller further agrees to insert in any subcontract hereunder which is in excess of \$1,000,000 and which contains the clauses entitled "Utilization of Small Business Concerns" and "Utilization of Concerns in Labor Surplus Areas" provisions which shall conform substantially to the language of this clause, including the paragraph (d).

(e) Utilization of Small Business Concerns

(1) It is the policy of the Government as declared by the Congress that a fair proportion of the purchases and contracts for supplies and services for the Government be placed with small business concerns.

(2) Seller agrees to accomplish the maximum amount of subcontracting to small business concerns that Seller finds to be consistent with the efficient performance of this order.

(f) Utilization of Concerns in Labor Surplus Areas

It is the policy of the Government to place supply contracts with suppliers who will perform such contracts substantially in areas of persistent or substantial labor surplus where this can be done, consistent with the efficient performance of the contract, at prices no higher than are obtainable elsewhere. Seller agrees to use his best efforts to place his subcontracts in accordance with this policy. In complying with the foregoing and with paragraph (2) of the article of this order entitled "Utilization of Small Business Concerns", Seller in placing his subcontracts shall observe the following order preference: (i) persistent labor surplus area concerns which are also small business concerns; (ii) other persistent labor surplus area concerns; (iii) substantial labor surplus area concerns which are also small business concerns; (iv) other substantial labor surplus area concerns; and (v) small business concerns which are not labor surplus area concerns.

March 13, 1962

Attachment No. 1

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GENERAL PROVISIONS,

1. DEFINITIONS

As used throughout this order, the term "Government" means the United States of America; the term "Commission" means the United States Atomic Energy Commission or its duly authorized representatives; the term "Westinghouse" means Westinghouse Electric Corporation, Bettis Atomic Power Laboratory. The term "order" shall mean the same as the terms "contract" and "subcontract" and the term "Seller" shall mean the same as the term "subcontractor". The term "Guarantor" shall mean Texas Instruments, Incorporated.

2. GENERAL

This order (which term shall be deemed to include related plans, drawings, specifications, and other documents specifically identified herein) contains the entire agreement of the parties, and no modification, alteration, waiver, or other provision which is inconsistent with or in addition to the provisions of this order shall have any force or effect unless the same shall be incorporated in this order by change notice thereto in accordance with the Changes Article of these General Provisions. Failure of Westinghouse to enforce any of its rights hereunder shall not constitute a waiver of such rights or of any other rights under this order.

3. CHANGES, EXTRAS AND SUBSTITUTIONS

(a) Westinghouse may at any time, by a written change notice issued by Westinghouse Purchasing Department, and without notice to the sureties, make changes, within the general scope of this order, in any one or more of the following: (i) drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for Westinghouse in accordance therewith; (ii) method of shipment or packing; and (iii) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for, the performance of any part of the work under this order, whether changed or not changed by any such change notice, an equitable adjustment shall be made in the order price or delivery schedule, or both, and the order shall be modified in writing accordingly. Any claim by Seller for adjustment under this article must be asserted within 30 days from the date of receipt by Seller of the notification of change: Provided, however, that Westinghouse, if it decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this order. Where the cost of property made obsolete or excess as a result of a change is included in Seller's claim for adjustment, Westinghouse shall have the right to prescribe the manner of disposition of such property. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes". However, nothing herein shall excuse Seller from proceeding with this order as changed.

(b) Except as otherwise provided for in this order, Westinghouse will not pay for additional work or extras unless such additional work or extras have been ordered in writing and the price therefor agreed upon.

(c) Seller shall not substitute other materials or accessories for those specified in the order without written consent of Westinghouse.

(d) No variation in quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified elsewhere in this order.

4. FEDERAL, STATE, AND LOCAL TAXES

(a) As used throughout this article, the term "tax inclusive date" means the date of this order. As to additional supplies or services procured by modification to this order, the term "tax inclusive date" means the date of such modification.

(b) Except as may be otherwise provided in this order, the order price includes all Federal, State, and local taxes and duties in effect and applicable to this order on the tax inclusive date, except taxes from which the Government, Seller, or the transactions or property covered by this order are then exempt. Unless specifically excluded, duties are included in the order price.

(c) (1) If Seller is required to pay or bear the burden (i) of any tax or duty, which either was not to be included in the order price pursuant to the requirements of paragraph (b), or was specifically excluded from the order price by a provision of this order; or (ii) of an increase in rate of any tax or duty, whether or not such tax or duty was excluded from the order price; or of any interest or penalty thereon, the order price shall be correspondingly increased: Provided, that Seller warrants in writing that no amount for such tax, duty or rate increase was included in the order price as a contingency reserve or otherwise: And provided further, That liability for such tax, duty, rate increase, interest, or penalty was not incurred through the fault or negligence of Seller or its failure to follow instructions of Westinghouse.

(2) If Seller is not required to pay or bear the burden, or obtains a refund or drawback, in whole or in part, of any tax, duty, interest, or penalty which (i) was to be included in the order price pursuant to the requirements of paragraph (b), (ii) was included in the order price, or (iii) was the basis of an increase in the order price, the order price shall be correspondingly decreased or the amount of such relief, refund, or drawback shall be paid to Westinghouse as directed by Westinghouse. The order price also shall be correspondingly decreased if Seller through its fault or negligence or its failure to follow instructions of Westinghouse, is required to pay or bear the burden, or does not obtain a refund or drawback of any such tax, duty, interest, or penalty. Interest paid or credited to Seller incident to a refund of taxes shall inure to the benefit of Westinghouse to the extent that such interest was earned after Seller was paid or reimbursed by Westinghouse for such taxes.

(3) Invoices or vouchers covering any adjustment of the order price pursuant to this paragraph (c) shall set forth the amount thereof as a separate item and shall identify the particular tax involved.

(4) Nothing in this paragraph (c) shall be applicable to social security taxes; net income taxes; excess profit taxes; capital stock taxes; unemployment compensation taxes; or any State and local taxes, except those levied on or measured by the order or sales price of the services or completed supplies furnished under this order, including gross income taxes, gross receipts taxes, sales and use taxes, excise taxes, or franchise or occupation taxes measured by sales or receipts from sales.

(5) No adjustment of less than \$100 shall be made in the order price pursuant to this paragraph.

(d) Unless there does not exist any reasonable basis to sustain an exemption, Westinghouse agrees upon request of Seller, without further liability except as otherwise provided in this order, to furnish evidence appropriate to establish exemption from (i) any Federal tax, which Seller warrants in writing was excluded from the order price, or (ii) any State or local tax: Provided, That evidence appropriate to establish exemption from duties will be furnished, and Government bills of lading will be issued, only at the discretion of Westinghouse. In addition, Westinghouse may furnish evidence appropriate to establish exemption from any tax that may, pursuant to this article, give rise to either an increase or decrease in the order price.

(e) (1) Seller shall promptly notify Westinghouse of all matters pertaining to Federal, State, and local taxes and duties that reasonably may result in either an increase or decrease in the order price.

(2) Whenever an increase or decrease in the order price may be required under this article, Seller shall take action as directed by Westinghouse, and the order price shall be equitably adjusted to cover the costs of such action, including any interest, penalty, and reasonable attorney's fees.

(f) For the purpose of this order under this Article 4, personal property, which is acquired by Seller or furnished by Westinghouse, and used in the performance of this order, title to which on the tax assessment date is vested in the Government, and any interest which Seller may have in such property, are considered exempt from personal property taxes. Further, the provisions of paragraph (c) of this Article shall be applicable to personal property taxes that may be assessed on such property or Seller's interest therein, and the order price shall be increased or decreased in accordance with the provisions of such paragraph (c) for such taxes or the allocable portion thereof, and any interest or penalty thereon which would otherwise be subject to adjustment under paragraph (c). Seller warrants that the prices in this order do not include any amounts as a contingency reserve or otherwise on account of any such taxes on personal property or any interest therein.

5. INSPECTION

(a) All work (which term throughout this article includes without limitation raw materials, procedures and processes, components, intermediate assemblies and end products) required by this order shall be subject to inspection and test by Westinghouse and the Government, to the extent practicable at all

times and places including the period of manufacture, and in any event prior to acceptance. Seller is responsible for and shall upon Westinghouse's request furnish evidence of compliance with all requirements of the order, and inspection and test by Westinghouse or the Government of any work does not relieve Seller from any responsibility to meet the order requirements.

(b) In case any supplies or lots of supplies are defective in material or workmanship or otherwise not in conformity with the requirements of this order, Westinghouse shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction. Supplies or lots of supplies which have been rejected or required to be corrected shall be removed, or, if permitted or required by Westinghouse, corrected in place by and at the expense of Seller promptly after notice, and shall not thereafter be tendered for acceptance unless the former rejection or requirement of correction is disclosed. If Seller fails promptly to remove such supplies or lots of supplies which are required to be removed, or promptly to replace or correct such supplies or lots of supplies, Westinghouse either (i) may by contract or otherwise replace or correct such supplies and charge to Seller the cost occasioned Westinghouse thereby, or (ii) may terminate this order for default as provided in the clause of this order entitled "Default". Unless Seller corrects or replaces such supplies within the delivery schedule, Westinghouse may require the delivery of such supplies at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction in price shall be a dispute concerning a question of fact within the meaning of the clause of this order entitled "Disputes".

(c) If any inspection or test is made by Westinghouse or the Government on the premises of Seller or a lower-tier subcontractor, Seller, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of Westinghouse and Government inspectors in the performance of their duties. If Westinghouse or Government inspection or test is made at a point other than the premises of Seller or a lower-tier subcontractor, it shall be at the expense of Westinghouse except as otherwise provided in this order; Provided that in case of rejection Westinghouse shall not be liable for any reduction in value of samples used in connection with such inspection or test. All inspection and tests by Westinghouse and the Government shall be performed in such a manner as not to unduly delay the work. Westinghouse reserves the right to charge to Seller any additional cost of Westinghouse or Government inspection and test when work is not ready at the time such inspection and test is requested by Seller or when reinspection or retest is necessitated by prior rejection. Acceptance or rejection of the work shall be made as promptly as practicable after delivery, except as otherwise provided in this order; but failure to inspect and accept or reject supplies shall neither relieve Seller from responsibility for such supplies as are not in accordance with the order requirements nor impose liability on Westinghouse and the Government therefor.

(d) The inspection and test by Westinghouse or the Government of any supplies or lots thereof does not relieve Seller from any responsibility regarding defects or other failures to meet the order requirements which may be discovered prior to acceptance. Except as otherwise provided in this order, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

(e) Inspection and test requirements specifically required by this order are for the convenience of Westinghouse and the Government and do not relieve Seller of his responsibility to provide a high quality product and one which meets all applicable order specifications. If during Westinghouse's or Government's own test or inspection of the equipment after its delivery, any condition is uncovered which fails to meet all the applicable order specifications, Seller is financially responsible in accordance with the provisions of Article 6 - Warranty, for correcting these conditions; this requirement applies irrespective of the extent of testing or inspection specifically required of Seller by the order.

(f) Seller shall provide and maintain and require its lower-tier subcontractors to provide and maintain an inspection and quality control system acceptable to Westinghouse covering the work hereunder. Records of all inspection work by Seller and its lower-tier subcontractors shall be kept complete and available to Westinghouse or the Government during the performance of this order and for such longer period as may be specified elsewhere in this order.

6. WARRANTY

(a) In addition to its obligations under the provisions of this order concerning inspection and acceptance, except for those Westinghouse furnished fabricated components per Article 27, paragraph (d) of these provisions Seller warrants materials and workmanship, that the items furnished under this order will be manufactured in accordance with the applicable plans, drawings, specifications and approved processes. Provided, however, Seller shall also warrant any work Seller may perform or material Seller may furnish with respect to Westinghouse furnished fabricated components. In the event that Westinghouse, within seven years after delivery or one year after the date of start-up for power production of the reactor core, whichever occurs first, ascertains that such items supplied under this order are defective in materials or workmanship, are not in accordance with the applicable plans, drawings, specifications, and so notifies Seller, Seller agrees promptly to make good any defects in materials or workmanship or to correct such items in accordance with such drawings, specifications, including approved process outlines, without cost to Westinghouse. Westinghouse has the right to require Seller to correct in place any item of equipment delivered under this order or to return such equipment to Seller for correction. In exercising this right, Westinghouse will notify Seller which alternative it proposes to take. In this connection, Westinghouse will be reasonable in making its election in terms of its and the Government's time requirements, the relative economics of each course and the particular circumstances at the time of election, giving due regard to any reasonable requests of Seller. In the event that Seller is required to correct in place, Seller shall not be required to incur costs for such correction in excess of an amount equal to the price of this order. In the event repair or replacement of any item is required, Westinghouse shall be responsible for removing the defective item from the reactor plant system and Seller shall, upon completion of repair or replacement, make delivery as directed by Westinghouse, but shall not be obligated to incur costs in excess of an amount equal to the price of this order plus shipping (to and from Seller's plant) and packing and packaging charges, nor shall Seller be responsible for any costs of reinstallation of such item in the reactor plant system: Provided, however, Seller shall have sole responsibility to remove and repair or replace and reinstall defective items upon request by Westinghouse made prior to installation of the reactor core in the reactor plant system.

(b) Items which Seller is required to make good or correct in accordance with the provisions of this Article may have become contaminated with radioactivity through use. Should the level of radioactivity of any such item be sufficient to create by itself a "radiation area" as defined in 10 C.F.R. Sec. 20.202 as in effect on the date of this order, Seller shall nevertheless promptly make good or correct such item as directed by Westinghouse. In the event Seller's costs of making good or correcting any such item are increased solely by reason of the level of radioactivity thereof which exceeds the level specified in the definition of "radiation area", an equitable adjustment shall be made in the order price, and such adjustment shall be agreed to in writing. With respect to any such item having a level of radioactivity sufficient to create by itself a "radiation area", Westinghouse shall have the right at its election to require Seller to replace such item at a reasonable price to be mutually agreed upon, taking as a credit against such price the estimated cost of Seller's making good or correcting such item but not including additional costs which would have been incurred by Seller solely by reason of the level of radioactivity thereof which exceeds the level specified in the definition of "radiation area". Failure to agree to an equitable adjustment in price, or a reasonable price for a replacement item as provided for herein, shall be a dispute concerning a question of fact within the meaning of the Article of this order entitled "Disputes".

(c) Seller's warranty as provided in this Article shall continue as to corrected or replaced supplies, or, if only parts of such supplies are corrected or replaced, to such corrected or replaced parts, for a further period of one year from the date of start-up for power production of the entire reactor system or systems in which such corrected or replaced supplies or parts are installed, or seven years from the date of redelivery to Westinghouse of such corrected or replaced supplies or parts, whichever period is shorter. If Westinghouse does not require correction or replacement of defective or nonconforming supplies, Seller, if required by Westinghouse within a reasonable time after the notice of defect or nonconformance, shall repay such portion of the order price of the supplies as is equitable in the circumstances.

(d) If Seller fails to proceed with reasonable promptness to make any repair, correction or replacement in accordance with the provisions of this article, Westinghouse reserves the right to cause such repair, correction or replacement to be made at reasonable cost and Seller agrees to reimburse Westinghouse for the costs incurred thereby.

(e) The warranty expressed in this article constitutes the sole warranty except as to title, made by Seller with respect to the items supplied under this order.

7. APPROVAL OF DESIGN PLANS - PROCEDURES

As directed by Westinghouse, Seller shall submit process outlines and associated working drawings and process specifications for approval by Westinghouse. Seller shall not begin fabrication until a Westinghouse approved process has been developed, except where Westinghouse does not require process outline submittal.

8. CONSEQUENTIAL DAMAGES

Seller shall not be liable to Westinghouse or the Government for loss by reason of plant shutdown, non-operation or increased expense of operation of other equipment, damage to or destruction of the plant or any other consequential loss or damage. Except as otherwise provided in this order, this article shall not be construed to relieve Seller from any public liability, nor shall it be construed as an undertaking by Westinghouse or the Government to indemnify Seller against such public liability.

9. RESPONSIBILITY FOR SUPPLIES

Except as otherwise provided in this order, (i) Seller shall be responsible for the supplies covered by this order until they are delivered at the designated delivery point, regardless of the point of inspection; (ii) after delivery to Westinghouse at the designated point and prior to acceptance by Westinghouse or rejection and giving notice thereof by Westinghouse, Westinghouse shall be responsible for the loss or destruction of or damage to the supplies only if such loss, destruction, or damage results from the negligence of officers, agents, or employees of Westinghouse or the Government acting within the scope of their employment; and (iii) Seller shall bear all risks as to rejected supplies after notice of rejection, except that Westinghouse or the Government shall be responsible for the loss, or destruction of, or damage to the supplies only if such loss, destruction or damage results from the gross negligence of officers, agents, or employees of Westinghouse or the Government acting within the scope of their employment.

10. DELIVERIES

(a) Delivery of the items supplied under this order shall be made upon the following dates, provided (i) all material to be furnished to the Seller or its designees by Westinghouse in accordance with the provisions of Article 27 of the order has been supplied in accordance with the schedule mutually agreed upon, except for additional material and such material as the Seller agrees to accept at a later date, and (ii) manufacturing releases are given to Seller by Westinghouse within fourteen days after completion of the corresponding evaluation and certification component, such completion to include delivery by Seller to Westinghouse of acceptable reports and data as required elsewhere in this order. In the event the work of Seller is delayed by reason of delay in the supply of Westinghouse-furnished Government material or in giving manufacturing releases, and such delay causes an increase in the time required for performance of this order, an equitable adjustment shall be made in the delivery schedule, and the order shall be modified in writing accordingly. (sc)

Upon notice of delay being given by Westinghouse to Seller fifteen days or more prior to the scheduled date for materials or releases, no price increase will result for a grace period of fifteen days after the scheduled date. For any delays after the fifteen day grace period, or after the scheduled date if fifteen day notice has not been given by Westinghouse, an equitable price adjustment shall be made, but such adjustment shall be limited to Seller's unabsorbed overhead costs, provided however that delay in the supply of Westinghouse-furnished Government material or manufacturing releases during the first three months after date of order placement shall not result in an increase in the order price.

The delivery dates to Westinghouse are as follows:

<u>Item</u>	<u>Date of Delivery</u>
Peripheral Seal Bars	[REDACTED]
Cores and Spares	[REDACTED]

The Seller's dates by which he shall complete manufacturing qualification for various components are as follows:

<u>Item</u>	<u>Date of Qualification</u>
Element	[REDACTED]
Subassembly	[REDACTED]
Cluster	[REDACTED]
Control Rod	[REDACTED]

(b) Seller shall within 30 days after the date of the contract, prepare and submit to Westinghouse for approval, a schedule showing the order in which the Seller proposes to carry on the work, the date on which it will begin the several operations (including procurement of materials and equipment) and the contemplated dates for completing same, Seller shall report the actual progress for each operation shown on the schedule at the end of each month or at such intervals as are directed by Westinghouse and shall immediately deliver to Westinghouse five copies of the progress report.

(c) Seller shall furnish sufficient forces, plant and equipment, and shall work such hours, including night shifts, overtime operations and Sunday and holiday work, as may be necessary to insure the prosecution of the work in accordance with the approved progress schedule.

(d) Failure of Seller to comply with the requirements of this Article may be a ground for determination by Westinghouse that Seller is endangering performance of this contract in accordance with its terms.

11. PAYMENTS

(a) Progress Payments, as requested by Seller and approved by Westinghouse, based on the percentage or stage of completion of work performed under this order will be made as the work progresses, at the end of each calendar month, or as soon thereafter as practicable, provided the total amount paid as progress payments shall not exceed the actual costs incurred by Seller for work under this order plus a prorata share of the estimated profit to cover the work completed. Value of materials, supplies, and subcontracted parts procured by Seller for the work shall be considered in determining the percentage or stage of completion. Seller shall submit a breakdown of percentage completion by

component for each month billed and a forecast of anticipated completion and billing for the following month and the remainder of the fiscal year in a format acceptable to Westinghouse. Progress payments based on percentage or stage of completion may be made at more frequent intervals if approved by Westinghouse.

(b) In making such progress payments, 10% of the amount due, as approved by Westinghouse, shall be retained by Westinghouse until final completion and acceptance of all work required hereunder; provided however, that Westinghouse, at any time after 50% of such work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining progress payments in full.

(c) All material and work covered by progress payments made shall thereupon become the sole property of the Government, but this provision shall not be construed as relieving Seller from the sole responsibility for all materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the rights of Westinghouse to require the fulfillment of all the terms of the order.

(d) Upon completion and acceptance of all work required hereunder, the amount due Seller under the order will be paid upon the presentation of a properly executed invoice therefor, after Seller shall have furnished Westinghouse with a release, if required, in such form and with such exceptions as may be approved by Westinghouse, of all claims against Westinghouse and the Government arising under and by virtue of this order. Said release shall not constitute a waiver by Seller of any indemnity to Seller (in respect to nuclear incidents) that may be afforded by virtue of or under this order, or by law.

12. ASSIGNMENT

Neither this order nor any interest therein nor claim thereunder shall be assigned or transferred by Seller, except as expressly authorized in writing by Westinghouse. This order may be assigned by Westinghouse to the Government or any designee of the Government, provided that written notice thereof is given to Seller.

13. SUBCONTRACTING

Seller shall not subcontract any work nor permit lower-tier subcontracting of any work on any item to be supplied under this order without prior written approval of Westinghouse.

14. SECURITY AND CLASSIFICATION

- (a) (1) In the performance of the work under this order, Seller shall, in accordance with the Commission's security regulations and requirements, be responsible for safeguarding restricted data and other classified matter and protecting against sabotage, espionage, loss and theft, the classified documents, materials, equipment processes, etc., as well as such other material of high intrinsic or strategic value as may be in Seller's possession in connection with performance of work under this order. Seller shall, upon request of Westinghouse or upon completion or termination of this order transmit to Westinghouse any classified matter in the possession of Seller or any person under Seller's control in connection with performance of this order.
- (2) Seller agrees to conform to all security regulations and requirements of the Commission.
- (3) The term "Restricted Data" as used in this article, means all data concerning (i) design, manufacture, or utilization of atomic weapons; (ii) the production of special nuclear material; or (iii) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Atomic Energy Act of 1954.
- (4) Except as the Commission may authorize, in accordance with the Atomic Energy Act of 1954, Seller shall not permit any individual to have access to Restricted Data until the designated investigating agency shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual and the Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security. As used in this subparagraph, the term "designated investigating agency" means the United States Civil Service Commission or the Federal Bureau of Investigation, or both, as determined pursuant to the provisions of the Atomic Energy Act of 1954. Access to classified information other than Restricted Data shall not be granted unless the recipient possesses appropriate security clearance.
- (5) It is understood that disclosure of information relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any restricted data or any top secret, secret or confidential matter that may come to Seller or any person under Seller's control in connection with work under this order, may subject Seller, his agents, employees, and subcontractors to criminal liability under the laws of the United States (see the Atomic Energy Act of 1954, 68 Stat. 919). (See also Executive Order 10104 of Feb. 1, 1950, 15 F.R. 597).
- (6) Seller shall immediately submit a confidential report to Westinghouse whenever, for any cause, Seller has reason to believe that there is any act or danger of espionage or sabotage affecting any of the work under this order.
- (b) Except as otherwise authorized in writing by Westinghouse, Seller shall insert provisions similar to the foregoing in all lower-tier orders under this order.

(c) In the performance of work under this order, Seller shall assign classifications to all documents, material and equipment originated or generated by Seller in accordance with classification guidance furnished to Seller by Westinghouse or the Commission. Every subcontract and purchase order issued hereunder involving the origination or generation of classified documents, material or equipment, shall include a provision to the effect that in the performance of such subcontract or purchase order the subcontractor or supplier shall assign classifications to all such documents, material and equipment in accordance with classification guidance furnished to such subcontractor or supplied by Seller.

15. NONDISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this order, Seller agrees as follows:

(a) Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by Westinghouse setting forth the provisions of this nondiscrimination article.

(b) Seller will, in all solicitations or advertisements for employees placed by or on behalf of Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(c) Seller will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by Westinghouse, advising the said labor union or workers' representative of Seller's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) Seller will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the cognizant contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(e) Seller will comply with all provisions of Executive Order No. 10925 of March 6, 1961, and of the rules, regulations, and relevant orders of The President's Committee on Equal Employment Opportunity.

(f) In the event of Seller's non-compliance with the nondiscrimination clauses of this order or with any of the said rules, regulations, or orders, this order may be cancelled in whole or in part and Seller may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of The President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

(g) Seller shall include the provisions of the foregoing paragraphs (a) through (f), in every subcontract or purchase order unless exempted by rules, regulations, or orders of The President's Committee on Equal Employment Opportunity issued pursuant to Section 303 of Executive Order No. 10925 of March 6, 1961, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions, including sanctions for non-compliance: Provided, however, that in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, Seller may request the United States to enter into such litigation to protect the interests of the United States.

16. TERMINATION

(a) The performance of work under this order may be terminated, in whole, or from time to time in part by Westinghouse in accordance with this article. Termination of work hereunder shall be effected by delivery to Seller of a Notice of Termination specifying the extent to which performance of work under the order is terminated and date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination and except as otherwise directed by Westinghouse, Seller shall, (1) stop work under the order on the date and to the extent specified in the Notice of Termination; (2) place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portions of work under the order as may not be terminated; (3) terminate all orders and subcontracts to the extent that they relate to the performance of any work terminated by the Notice of Termination; (4) assign to Westinghouse, in the manner and to the extent directed by Westinghouse, all of the right, title and interest of Seller under the orders or subcontracts so terminated; in which case, the Government shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; (5) settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts subject to the approval or ratification of Westinghouse to the extent it may require, which approval or ratification shall be final for all the purposes of this article; (6) transfer title and deliver to Westinghouse in the manner, to the extent, and at the time, if any, directed by Westinghouse (i) the fabricated or unfabricated parts, work in process, completed work, supplies and other material produced as a part of, or required in connection with the performance of, the work terminated by Notice of Termination, and (ii) the completed or partially completed plans, drawings, information, and other property which, if the order had been completed, would be

furnished to Westinghouse; (7) use his best efforts to sell in the manner, to the extent, at the time, and at the price or prices directed or authorized by Westinghouse, any property of the types referred to in provision (6) of this paragraph; provided, however, that Seller (i) shall not be required to extend credit to any purchaser and (ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by Westinghouse, and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by Westinghouse to Seller under this order or shall otherwise be credited to the price or cost of the work covered by this order or paid in such other manner as Westinghouse may direct; (8) complete performance of such parts of the work as shall not have been terminated by the Notice of Termination; and (9) take such action as may be necessary or as Westinghouse may direct for protection and preservation of the property related to this order which is in the possession of Seller and in which Westinghouse or the Government has or may acquire an interest. At any time after expiration of the plant clearance period (as defined in Chapter 9112 of the AEC Manual), the Seller may submit to Westinghouse a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by Westinghouse, and may request Westinghouse to remove such items or enter into a storage agreement covering them. Not later than 15 days thereafter, Westinghouse will accept title to such items and remove them or enter into a storage agreement covering the same, provided that the list submitted shall be subject to verification by Westinghouse upon removal of the items, or if the items are stored, within 45 days from the date of submission of the lists, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

(c) After receipt of a Notice of Termination, Seller shall submit to Westinghouse its termination claim, in the form and with the certification prescribed by Westinghouse. Such claim shall be submitted promptly but not later than four months from the effective date of termination, unless one or more extensions in writing are granted by Westinghouse, upon request of Seller made in writing within such four month period or authorized extension thereof. However, if Westinghouse determines that the facts justify such action, it may receive and act upon any such termination claim at any time after such four month period or any extension thereof. Upon failure of Seller to submit its termination claim within the time allowed, Westinghouse may determine, on the basis of information available to it, the amount, if any, due to Seller in respect to the termination and such determination shall be final. After Westinghouse has made a determination under this paragraph, it shall pay Seller the amount so determined.

(d) Subject to the provisions of paragraph (c), Seller and Westinghouse may agree upon the whole or any part of the amount or amounts to be paid to Seller by reason of the total or partial termination of work pursuant to this article, which amount or amounts may include a reasonable allowance for profit on work done and Westinghouse shall pay the agreed amount or amounts. Nothing in paragraph (c) of this article, prescribing the amount to be paid to Seller in the event of the failure of Seller and Westinghouse to agree upon the whole amount to be paid to Seller by reason of the termination of work pursuant to this article, shall be deemed to limit, restrict, or otherwise determine or effect the amount or amounts which may be agreed upon to be paid to Seller pursuant to this paragraph (d).

(e) In the event of the failure of Seller and Westinghouse to agree as provided in paragraph (d) upon the whole amount to be paid to Seller by reason of the termination of work pursuant to this article, Westinghouse, but without duplication of any amounts agreed upon in accordance with paragraph (d) shall pay to Seller the following amounts:

(1) For completed supplies accepted by Westinghouse (or sold or acquired as provided in paragraph (b) (7) above) and not theretofore paid for a sum equivalent to the aggregate price for such supplies computed in accordance with the price or prices specified in the order, appropriately adjusted for any saving of freight or other charges.

(2) In respect of the work terminated as permitted by this article, the total (without duplication of any items) of (i) the cost of such work, including initial costs and preparatory expenses allocable thereto, exclusive of any costs attributable to supplies paid or to be paid for under paragraph (e) (1) hereof; and (ii) the cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in paragraph (b) (5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by Seller prior to the effective date of the Notice of Termination of work under this order, which amounts shall be included in the cost on account of which payment is made under subdivision (1) above; and (iii) a sum equal to 2% of the part of the amount determined under subdivision (i) which represents the cost of articles and materials not processed by Seller, plus a sum equal to 8% of the remainder of such amount, but the aggregate of such sum shall not exceed 6% of the whole of the amount determined under subdivision (i) above, which amount for the purpose of this subdivision (iii) shall exclude any charges for interest on borrowing provided, however, that if it appears that Seller would have sustained a loss on the entire order had it been completed no profit shall be included or allowed under this subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss.

(3) The reasonable cost of settlement, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the order and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of the property allocable to this order. The total sum to be paid to Seller under subdivision (1) and (2) of this paragraph (e) shall not exceed the total order price reduced by the amount of payments otherwise made and as further reduced by the order price of work not terminated. Except for normal spoilage and except to the extent that Westinghouse or the Government shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to Seller as provided in paragraph (e) (1) and paragraph (e) (2) (i), the fair value as determined by Westinghouse of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to Westinghouse or to a purchaser pursuant to paragraph (b) (7).

(f) The obligation of Westinghouse to make any payments under this article shall be subject to deductions in respect of (1) all unliquidated advance or other payments on account theretofore made to Seller, (2) any claim which Westinghouse may have against Seller, in connection with this order and (3) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things retained by Seller, or sold, and not otherwise recovered by or credited to Westinghouse.

(g) If the termination hereunder be partial, prior to the settlement of the terminated portion of this order, Seller may file with Westinghouse a request in writing that an equitable adjustment be made in the price or prices specified in the order for the work in connection with the continued portion not terminated by the Notice of Termination, and the appropriate fair and reasonable adjustment shall be made in such price or prices.

(h) Westinghouse may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by Seller in respect to the terminated portion of the order, whenever in the opinion of Westinghouse the aggregate of such payments shall be within the amount to which Seller will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed upon or determined to be due under this article, such excess shall be payable by Seller to Westinghouse upon demand, together with interest computed at the rate of 6% per annum, for the period from the date such excess payment is received by Seller to the date on which such excess is repaid; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in Seller's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition.

(i) For the purpose of paragraph (c) and (e) hereof, the amounts of the payments to be made by Westinghouse to Seller shall be determined in conformity with the policies and principles set forth in Chapter 9112 of the AEC Manual in effect at the date of this order. Unless otherwise provided for in this order, or by applicable statute, Seller, for a period of three (3) years after final settlement under the order shall make available to Westinghouse and the Government at all reasonable times at the office of Seller but without direct charge to Westinghouse or the Government all its books, records, documents, or other evidence bearing on the costs and expenses of Seller under the order and in respect of the termination of work hereunder; or, to the extent approved by the Government, photographs, micro-photographs, or other authentic reproductions thereof.

(j) Seller shall have the right of appeal, under the Article of this contract entitled "Disputes" from any determination made by Westinghouse under paragraphs (c) or (e) above, except that if Seller has failed to submit its claim within the time provided in paragraph (c) above and has failed to request extension of such time, he shall have no such right of appeal. In any case where Westinghouse has made a determination of the amount due under paragraph (c) or (e) above, Westinghouse shall pay to Seller the following: (i) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by Westinghouse, or (ii) if an appeal has been taken, the amount finally determined on such appeal.

17. DEFAULT

(a) Westinghouse may, subject to the provisions of paragraph (b) below, by written Notice of Default to Seller, terminate the whole or any part of this order in any one of the following circumstances; (i) if Seller fails to make delivery of the supplies or to perform the services within the time specified herein or any extension thereof, or (ii) if Seller fails to perform any of the other provisions of this order, or so fails to make progress as to endanger performance of this order in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of ten (10) days (or such longer period as Westinghouse may authorize in writing) after receipt of a formal notice from Westinghouse specifying such failure.

(b) Except with respect to defaults of lower-tier subcontractors, Seller shall not be liable for any excess costs if the failure to perform the order arises out of causes beyond the control and without the fault or negligence of Seller. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case, the failure to perform must be beyond the control and without the fault or negligence of Seller. If the failure to perform is caused by the default of a lower-tier subcontractor, and if such default arises out of causes beyond the control of both Seller and the lower-tier subcontractor, and without the fault or negligence of either of them, Seller shall not be liable for any excess costs for failure to perform, unless the supplies or services to be furnished by the lower-tier subcontractor were obtainable from other sources in sufficient time to permit Seller to meet the required delivery schedule.

(c) In the event Westinghouse terminates this order in whole or in part as provided in paragraph (a) of this article, Westinghouse may procure, upon such terms and in such manner as Westinghouse may deem appropriate, supplies or services similar to those so terminated, and Seller shall be liable to Westinghouse for any excess costs for such similar supplies or services; provided, however, that Seller shall continue the performance of this order to the extent not terminated under the provisions of this article.

(d) If this order is terminated as provided in paragraph (a) of this article, Westinghouse, in addition to any other rights provided in this article, may require Seller to transfer title and deliver to Westinghouse, in the manner and to the extent directed by Westinghouse, (i) any completed supplies, and (ii) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing materials") as Seller has specifically produced or specifically acquired for the

performance of such part of this order as has been terminated; and Seller shall, upon direction of Westinghouse, protect and preserve property in possession of Seller in which Westinghouse has an interest. Payment for completed supplies delivered to and accepted by Westinghouse shall be at the order price. Payment for manufacturing materials delivered to and accepted by Westinghouse and for the protection and preservation of property shall be in an amount agreed upon by Seller and Westinghouse. Failure to agree to such amount shall be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes".

(e) If, after notice of termination of this order under the provisions of paragraph (a) of this article, it is determined that the failure to perform this order is due to causes beyond the control and without the fault or negligence of Seller or lower-tier subcontractor pursuant to the provisions of paragraph (b) of this article, such Notice of Default shall be deemed to have been issued pursuant to the article of this order entitled "Termination", and the rights and obligations of the parties hereto shall, in such event, be governed by such article. (Except as otherwise provided in this order, this paragraph (e) applies only if this order contains such article.)

(f) The rights and remedies of Westinghouse provided in this article shall not be exhaustive and are in addition to any other rights and remedies provided by law or under this order.

18. SUSPENSION OF WORK FOR THE CONVENIENCE OF WESTINGHOUSE

(a) Westinghouse may, by written notice, direct Seller to suspend all or any part of the work for such period of time as may be determined by Westinghouse to be necessary or desirable for its convenience. If such suspension unreasonably delays the progress of the work and causes additional expense or loss to Seller in the performance of the work, not due to the fault or negligence of Seller, an equitable adjustment in the price and the time for performance shall be made by agreement of the parties, and the order shall be modified in writing accordingly; provided, however, that any claim by Seller for an adjustment hereunder must be asserted within thirty (30) days from the date of a start order for resumption of work; provided, however, that Westinghouse, if it decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this order. Failure to agree on an equitable adjustment under this article shall be deemed to be a dispute concerning a question of fact within the meaning of the article of this order entitled "Disputes".

(b) The provisions of this article shall not apply to any suspension of work resulting from action taken by Westinghouse under any other provision of this order.

19. EXAMINATION OF RECORDS

(a) Seller agrees that the Comptroller General of the United States, the Commission or any of their duly authorized representatives shall have access to and the right to examine any directly pertinent books, documents, papers and records of Seller involving transaction related to this order until the expiration of three years after final payment under this order.

(b) Nothing in this order shall be deemed to preclude an audit by the General Accounting Office of any transaction under this order.

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RENEGOTIATION

If this order is subject to the Renegotiation Act of 1951 as amended, the following provisions shall apply:

(a) This order is subject to the Renegotiation Act of 1951, as amended (P.L. 9, 82d Cong., 65 Stat. 7; P. L. 76, 83d Cong., 68 Stat. 1116; P. L. 216, 84th Cong., 69 Stat. 447; P. L. 870, 84th Cong., 70 Stat. 786; 86th Cong., 72 Stat. 1789; 86th Cong., 73 Stat. 210) and shall be deemed to contain all the provisions required by Section 104 of said Act.

(b) Seller agrees to insert the provisions of this article, including this paragraph (b), in all subcontracts specified in Section 103(g) of the Renegotiation Act of 1951.

21. DISPUTES

(a) Except as otherwise provided in this order, any dispute concerning a question of fact arising under this order which is not disposed of by agreement shall be decided by the Manager of the Commission's Pittsburgh Naval Reactors Office, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to Seller. The decision of the Manager of the Commission's Pittsburgh Naval Reactors Office shall be final and conclusive unless within 30 days from the date of receipt of such copy, Seller mails or otherwise furnishes to the Manager of the Commission's Pittsburgh Naval Reactors Office a written appeal addressed to the Commission. The decision of the Commission or its duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this article, Seller shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, Seller shall proceed diligently with the performance of the order and in accordance with the decision of the Manager of the Commission's Pittsburgh Naval Reactors Office.

(b) This "Disputes" article does not preclude consideration of law questions in connection with decisions provided for in paragraph (a) above; Provided, that nothing in this order shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

22. PASSAGE OF TITLE

Title to all articles or work supplied under this order shall vest in the Government upon delivery to and acceptance by Westinghouse in accordance with the provisions of articles 9 and 10.

23. LIENS

Seller agrees to deliver to Westinghouse the articles covered by this order free and clear of all liens, claims and encumbrances.

24. SAFETY, HEALTH, AND FIRE PROTECTION

Seller shall take all reasonable precautions in the performance of the work under this order to protect the health and safety of employees and of members of the public and to minimize danger from all hazards to life and property, and shall comply with all health, safety, and fire protection regulations and requirements (including reporting requirements) of the Commission and Westinghouse. In the event that Seller fails to comply with said regulations or requirements of the Commission or Westinghouse, Westinghouse may, without prejudice to any other legal or contractual rights of the Commission or Westinghouse, issue an order stopping all or any part of the work; thereafter a start order for resumption of work may be issued at the discretion of Westinghouse. Seller shall make no claim for an extension of time or for compensation or damages by reason of or in connection with such work stoppage.

25. SPECIAL TOOLING

(a) The term "special tooling" as used in this article, means all jigs, dies, fixtures, molds, patterns, special taps, special gauges, special test equipment, other special equipment and manufacturing aids, and replacements thereof acquired or manufactured by Seller for use in the performance of this order which are of such a specialized nature that, without substantial modification or alteration, their use is limited to the production of such supplies or parts hereof, or the performance of such services, called for by this order, as are peculiar to the needs of the Government and/or Westinghouse. The term does not include: (i) items of tooling or equipment heretofore acquired by Seller, or replacements thereof, whether or not altered or adapted for use in the performance of this order; (ii) consumable small tools; or (iii) general or special machine tools or similar capital items.

(b) Seller agrees not to use any items of special tooling except in the performance of this order, or except as otherwise provided by this article, without the prior written approval of Westinghouse. Seller may, with the approval of Westinghouse, use the special tooling in the performance of other contracts with the Government, or subcontracts under Government contracts, provided that Seller agrees not to include in the price or prices for any such contracts or subcontracts, involving the use of such special tooling, the cost of such tooling or any allowance or charge to cover depreciation or amortization which has previously been charged against this order.

(c) As and when any substantial portion of usable special tooling is no longer needed by Seller for the performance of this order, and of other Government contracts and subcontracts as to which approval has been obtained under paragraph (b) above, Seller shall promptly notify Westinghouse thereof, and shall furnish to Westinghouse a list of the products, parts or services for the manufacture or performance of which such special tooling was used or designed. Upon completion or termination of all work under this order, or of this order and other Government contracts and subcontracts as to which approval has been obtained under paragraph (b) above, Seller shall furnish a final list in the same form covering all items not previously reported under this paragraph. Special tooling which has become obsolete as a result of changes in design or specification need not be reported, except as provided for in paragraph (d).

(d) In the event of any changes in design or specifications which affect interchangeability of parts, Seller shall, unless otherwise agreed to by Westinghouse, give Westinghouse notice of any part which is not interchangeable with the new or superseding parts and the usable special tooling for each part covered in such notice shall be retained by Seller subject to the provisions of paragraph (i), pending disposition under paragraph (f).

(e) At the time it furnishes any list or notice under (c) or (d) above, Seller may designate those items of special tooling (either specifically or by listing the particular products, parts or services for which such items were used or designed) which it desires to retain, together with a written offer; (i) to retain any or all of such items, free and clear of any Government interest, for an amount designated therein which should ordinarily not be less than the then fair value of such items (which fair value takes into account, among other things, the value of such items to Seller for use in further work by it); or (ii) to retain any or all such items for such period of time and subject to such terms and conditions as may be agreed to by the parties hereto, subject to ultimate retention or disposition of such items in accordance with paragraph (f) hereof.

(f) Within 90 days after receipt of any list or notices under paragraph (c) or (d) hereof, or such further period as may be agreed upon by the parties, Westinghouse shall furnish to Seller: (i) a list specifying the particular products, parts, or services for which the Government may require special tooling, together with a request that Seller transfer title (to the extent not previously transferred under any other article of this order) and deliver to Westinghouse all usable items of special tooling which were used or designed for the manufacture or performance of any designated portion of such products, parts, or services, and which were on hand when production of such products or parts, or performance of such services, ceased; or (ii) an acceptance or rejection of any offer made by the Seller under paragraph (e) above, or a request for further negotiation with respect thereto; or (iii) subject to the provisions of paragraph (j) thereof, a direction to Seller to sell, or to dispose of as scrap, for the account of Westinghouse, and or all of the special tooling covered by such list; or (iv) a statement with respect to any or all of the special tooling covered by such list that Westinghouse has no further interest therein and waives its rights therein; or (v) any combination of the foregoing, as the circumstances warrant. Seller shall promptly comply with any request by Westinghouse under this paragraph to transfer title to any items of special tooling, and shall, subject to the provisions of paragraph (j) hereof, (1) immediately prepare such items for shipment by proper packaging, packing, and marking in accordance with any instructions which may be issued by Westinghouse, and shall promptly deliver such items to Westinghouse, as directed by Westinghouse, or (2) if a storage agreement has been entered into, prepare such items for storage in accordance therewith, as directed by Westinghouse. Any items of special tooling so delivered or stored shall be accompanied by such operations or processes for which such items were used or designed. If Westinghouse has requested further negotiations under (ii) of this paragraph, Seller agrees that it will enter into such negotiations in good faith with Westinghouse. Any items of special tooling which are not disposed of by transfer of title and delivery to the Government and/or Westinghouse, or by acceptance of an offer of Seller made under paragraph (e), or of such offer as modified in the course of negotiations, shall be disposed of in the manner set forth in (iii) or (iv) of this paragraph.

(g) If Westinghouse accepts an offer of Seller to retain any items of special tooling, or if any such items are sold to third parties or disposed of as scrap, the net proceeds shall: (i) be deducted from the amounts due to Seller under this order and the order amended accordingly; or (ii) be otherwise paid as Westinghouse may direct.

(h) Seller agrees that it will follow its normal industrial practice in maintaining property control records on all the special tooling, and that it will make such records available for inspection by the Government and/or Westinghouse at all reasonable times. Seller further agrees that, to the extent practicable, it will identify by appropriate stamp, tag or other mark all special tooling subject to this article.

(i) Seller agrees that between the date any usable items of special tooling are no longer needed by it, within the meaning of this article, and the date of final disposition of such items under this article, it will take all reasonable steps necessary to maintain the identity and existing conditions of such items, unless Westinghouse has directed that such items be disposed of as scrap or has given notice under (f) (iv). Seller shall not be required to keep any such items in place.

(j) Any preparation of items for shipment required of Seller under paragraph (f) of this article, or any disposal as scrap under paragraph (f) of this article, or any disposal of scrap under paragraph (f) (iii), or any action required of Seller under paragraph (i), shall be taken pursuant to written instructions of Westinghouse, which shall (i) provide for an equitable adjustment of the order price to cover any additional cost to Seller not taken into account in the negotiation of this order, of complying with such instructions, which adjustment shall be made in accordance with the procedure set forth in the article of this order entitled "Changes", or (ii) otherwise provided for payments to Seller of any such additional cost. Any failure of Westinghouse to issue Seller specific disposition instructions shall be construed as an instruction to Seller to take the action required under paragraph (i) with provision for equitable adjustment or payment as provided for above.

(k) Seller agrees that, in placing any subcontracts or purchase orders under this order which involve the use of special tooling, the full cost of which is charged to such subcontract or purchase order, it will include therein appropriate provisions to obtain rights comparable to those granted to the Government and Westinghouse by this article, and agrees that, it will exercise such rights for the benefit of the Government, as Westinghouse may direct.

26. NON-STANDARD TOOLING

Seller agrees to make available to Westinghouse or the Government without charge for a period of one year after delivery of the core, all non-standard tooling not specifically covered by the Special Tooling Article which is essential to the assembly or disassembly of the core.

27. WESTINGHOUSE FURNISHED GOVERNMENT MATERIAL(a) General Terms Applicable to All Items in Article 27

(1) Title to furnished Government property shall remain in the Government. Title thereto shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such property, or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty. Seller shall maintain adequate property control records of such property consistent with good business practices and as may be prescribed by Westinghouse; and shall cause such property to be clearly marked (if not so marked) to show that it is property of the Government. Following successful completion of the order, certain material or residue and scrap therefrom shall become the property of Seller. The conditions and terms of Seller's possession are specified in paragraph (b) (4) and (j) (4) of this Article 27. All other Government material remains in the title of the Government.

(2) Westinghouse will furnish to Seller analytical test and inspection records for property furnished. Based upon these test and inspection results or such additional tests and inspections as Seller may elect to make at its own expense, Seller shall advise Westinghouse in writing of its final acceptance of the property, provided, however, Seller shall be obligated to accept property which meets the specification requirements of the order. In the event Seller fails to notify Westinghouse as to acceptance or rejection (i) within 30 days of receipt of property and records, or extension of time thereof mutually agreed upon between Seller and Westinghouse, or (ii) prior to use of property other than acceptance-testing, whichever occurs first, final acceptance shall be conclusively presumed, except as provided elsewhere in this Article. Any such furnished property which does not meet the specification requirements of the order will be replaced to Seller by Westinghouse in the form and condition required by the order specifications, provided Seller rejects such material within the 30 day time limit, or mutually agreed upon extension thereof. The term "latent defect" is defined as a defect in the material which is not apparent, prior to final acceptance as described above, in the analytical test and inspection records furnished by Westinghouse or by Seller's inspection in accordance with Seller's accepted inspection practice or an approved process outline, whether or not such inspection is actually performed by Seller, and such latent defects shall be limited to deviations from applicable material specifications specified elsewhere in this order.

(3) Seller shall, in accordance with sound industrial practice, and without additional cost to Westinghouse, maintain in operating condition, if applicable, protect and preserve such furnished property until disposed of by Seller in accordance with this order.

(4) Seller, upon delivery to it of the furnished property, assumes the risk of and shall be responsible for, any loss or destruction of or damage to such furnished property. Westinghouse shall bear all risks as to rejected supplies after notice of rejection, except that Seller shall be responsible for the loss, or destruction of, or damage to such rejected supplies only if such loss, destruction or damage results from the gross negligence of officers, agents, or employes of Seller or its subcontractors acting within the scope of their employment.

(5) In no event will Westinghouse be liable for loss by reason of plant shut-down, non-operation or increased expense of operation, or any other consequential loss or damage, except as specifically provided for elements in 27(f) and 27(g).

[REDACTED]

(6) Westinghouse and the Government shall at all times have access to the premises wherein such property is located.

(7) Any additional property furnished by Westinghouse for any reason, other than replacement of Seller rejected Westinghouse furnished material, components or equipment, shall be supplied FOB point of shipment with freight charges for account of Seller. Charges for such property shall be collected by Westinghouse by credit against payments otherwise due Seller from Westinghouse.

(8) Seller shall supply all material components, tools, property, and all other things necessary to meet the order requirements which are not specifically noted as being furnished by Westinghouse. Shipping containers shall be per MIL-N-19823 unless otherwise noted as being supplied by Westinghouse.

(b) Core Structural Material

(1) Westinghouse will furnish core structural material as listed in Section 1.7 of Attachment No. 5, "List of Government Material, Components, and Equipment to be supplied by Westinghouse for [REDACTED] Core Cartridge," at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. Such structural material shall not be used by Seller for development and evaluation work under the order, except where specifically required by order specifications.

(2) Structural material required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) By notice in writing, Westinghouse may decrease the property furnished or to be furnished by Westinghouse under this Section (b). In any such case, Westinghouse upon the written request of Seller shall equitably adjust the delivery dates or the order price or both, and any other contractual provisions affected by the decrease, in accordance with the procedures provided for in the Changes Article of this order.

(4) Title to structural material furnished by Westinghouse shall remain in the Government, except that, upon delivery and acceptance of the core, title to all the residue of such structural material shall vest in Seller. All scrap generated from machining and fabrication of such structural material becomes the property of Seller upon delivery and acceptance of the core, and shall be disposed of at his expense.

(5) After final acceptance by Seller, Seller shall be solely responsible for such property and shall bear all risks for subsequent rejection, provided however, that, prior to final acceptance by Westinghouse of the items to be delivered under this order, if Seller can show to the satisfaction of Westinghouse that a latent defect is present, and such latent defect was in the material as supplied by Westinghouse, Westinghouse will replace the material at no cost to Seller to the original specification.

(c) Tools and Equipment

(1) Westinghouse will furnish tools and equipment as listed in Section 3.0 of Attachment No. 5 at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) Tools and equipment required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) After acceptance by Seller, Seller shall be solely responsible for successful completion of all operations involving the use of Westinghouse furnished tools and equipment; provided however that Seller shall not warrant material, workmanship or design of such tools or equipment. If Seller can prove to the satisfaction of Westinghouse that a defect exists in the material, workmanship or design of Westinghouse furnished tools or equipment, Westinghouse, at no expense to Seller, will at Westinghouse's discretion either replace the supplied tools or equipment or cause them to be modified to correct such deficiency. Seller shall bear all risk for rejection of order components whether or not due to defects in the supplied tools or equipment. Westinghouse will not be liable for loss by reason of consequential loss or damage or increased expense of operation or any other consequential loss or damage for order components affected by operations involving Westinghouse supplied tools or equipment whether or not such loss, damage or increased expense arises from defects or any other aspects of Westinghouse furnished tools and equipment.

(d) Fabricated Components

(1) Westinghouse will furnish fully fabricated components as listed in Section 2.0 of Attachment No. 5 at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) Fabricated components required for the performance of this order in excess of the amount specified in Attachment No. 5 shall be procured by Seller, at Seller's expense, and in all cases shall conform to the required specifications.

(3) After final acceptance by Seller, Seller shall be responsible for successful installation per applicable order specifications of Westinghouse furnished fabricated components. Seller shall not warrant material, workmanship or design of such components, except as provided in Article 6 (a), Warranty. After final acceptance by Seller, Westinghouse will not be liable for loss by reason of plant shutdown, non-operation or increased expense of operation or any other consequential loss or damage arising from material, workmanship or design of Westinghouse furnished fabricated components, provided however that Westinghouse will at Westinghouse's discretion either replace or modify any defective Westinghouse furnished fabricated component at no cost to Seller if Seller can show to the satisfaction of Westinghouse that the defect is in material, workmanship or design.

(e) [redacted]

(1) Westinghouse will furnish [redacted] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid.

(2) [redacted] in excess of the amount specified in Attachment No. 5 will be furnished by Westinghouse to Seller and Seller shall be charged [redacted]

(3) Except as provided under 27(a) above, Seller shall be financially responsible for the value [redacted] not returned to Westinghouse. Seller shall be charged [redacted]

as specified in paragraph (e) (4) below.

(4) All unused [redacted] partially processed, rejected, and scrap and residues therefrom, will be returned to Westinghouse as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(5) Seller agrees to segregate [redacted] material which is partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

(6) After final acceptance by Seller, Seller shall be solely responsible for such property; shall bear all risks for subsequent rejection whether or not due to unknown or latent defects; and Westinghouse shall not be obligated to replace defective or rejectable property nor be liable for loss by reason of plant shutdown, non-operation or increased expense of operation or any other consequential loss or damage.

(f) Fuel and Poison [redacted]

(1) Westinghouse will furnish at no cost to Seller, FOB carrier, Seller's Plant, acceptable fuel and poison [redacted] identified in Part I of Attachment No. 7, [redacted], and in the following quantities:

<u>Element Type</u>	<u>Drawing No.</u>	<u>Quantity</u>
[redacted]	949-D-039	Item 1.
[redacted]	Items 1, 2, 3, 5, & 6	Item 2. Item 3. Item 5. Item 6.
[redacted]	950-D-376	Item 1
[redacted]	950-D-381	Item 1
[redacted]	952-D-996	

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to variations from the normal statistical distribution of these characteristics shall be replaced by Westinghouse at no cost to Seller in the form and condition in which originally to have been furnished, whether or not rejection occurs prior to the inspection established in (2) (ii) below, and further provided that Seller furnishes satisfactory evidence that Seller has expended reasonable effort to pre-select [redacted]

If additional [redacted] Westinghouse will furnish them and Seller will be charged as follows [redacted]

<u>Element Type</u>	<u>Drawing No.</u>	<u>Price</u>
[redacted]	949-D-039 Items 1,2,3,5, & 6	\$1,225
[redacted]	950-D-376, Item 1	1,264
[redacted]	950-D-381, Item 1	1,222
[redacted]	952-D-996	1,328

(ii) In addition to replacing rejected fuel and poison [redacted] Westinghouse shall pay to Seller a fixed dollar amount for each fuel or poison [redacted] in accordance with Attachment No. 8, "Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel [redacted], and in accordance with the terms and conditions herein set forth. If Seller's rejection occurs after [redacted] Seller should have detected the defect. Westinghouse will pay only to that inspection stage. In no event will payment exceed that amount at the last inspection stage as specified in Attachment No. 8 to the order.

[REDACTED]

(A) Payments to Seller for rejection of fuel [REDACTED] the order quality requirements for

[REDACTED]

shall be made at the total of the respective prices for each completed operation performed [REDACTED] set forth in Attachment No. 8, provided Seller has satisfactorily inspected for these characteristics in accordance with the inspection methods prescribed in paragraph I of Attachment No. 8.

(B) Payments to Seller for rejection [REDACTED] of failure to meet order quality requirements [REDACTED] shall be made at the total of the respective prices for each completed operation [REDACTED] set forth in Attachment No. 8, provided Seller satisfactorily tests and and inspects [REDACTED] prior to final machining, in accordance with the order requirements.

(C) Payments to Seller for rejection [REDACTED] of failure to meet order quality requirements [REDACTED] shall be made at the total of the respective prices for each completed operation [REDACTED] set forth in Attachment No. 8, provided Seller has satisfactorily inspected and tested at each prior processing stage, in accordance with the inspection methods prescribed in paragraph I of Attachment No. 8.

(D) In the event Seller does not perform a given inspection operation [REDACTED] as the result of an approved inspection sampling plan [REDACTED]

[REDACTED] payments to Seller shall be limited to the total of the respective prices for each completed operation [REDACTED] up to but not including the point in the sequence of operations where the sampled inspection operation would have been performed.

(iii) Any payments due Seller in accordance with provisions of this subparagraph (f) (2) of this Article 27 shall be reflected in an increase in total order price and shall be effected by a change notice to the order.

The provisions of this subparagraph (f) (2) of this Article 27 shall in no way relieve Seller from responsibility for complying with all requirements of the drawings, specifications and other provisions of this order, provided however, that Seller is not responsible for defects in the areas (A), (B), (C), (D), and (E) enumerated hereunder if Seller can show that such defects were not caused by Seller's processing:

- (A) Chemical composition
- (B) Mechanical properties
- (C) Corrosion properties
- (D)

- (E) Fuel and poison

Except for fuel and poison
Seller shall be responsible

(3) All unused fuel and poison processed, rejected, and scrap and residues therefrom, except Zircaloy, will be returned to Westinghouse or otherwise disposed of as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(4) Seller agrees to segregate the furnished Source and Special Nuclear material as well as such materials which are partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

(5) Special measures will be taken by Seller in the protection of and accounting for all Source and Special Nuclear Materials furnished by Westinghouse for the performance of this order, in accordance with the regulations and requirements of the Commission.

(6) Except as provided in 27 (a) above, Seller is financially responsible for value of any enriched special nuclear material, and shall be charged at the rate which is not returned to Westinghouse as either finished product or recoverable scrap or is not disposed of as non-recoverable scrap as hereinafter provided. Seller shall pack and ship recoverable scrap as directed by Westinghouse with freight charges for the account of Westinghouse. Seller shall dispose of non-recoverable scrap at his own expense as directed by Westinghouse. Non-recoverable scrap shall be that waste material which the Commission determines uneconomic to reprocess for recovery of SS Material. Recoverable scrap shall be that waste material which the Commission desires to reprocess for recovery of SS Material.

(7) Notwithstanding the provisions of Article 21, Disputes, of this order, the following provisions and procedures shall apply to the determination of quantities of U-235 delivered to or by Seller, and the U-235 isotopic enrichment of material, and the resolution of measurement differences resulting from such determination.

(1) Transfers of Other than Scrap

If the receiver does not accept the shipper's measurements and isotopic content thereof stated on the AEC transfer form covering material containing U-235 under this order, the receiver shall within sixty days after receipt of material or of the AEC transfer form covering such material, whichever date is later, submit a notice of disagreement in writing to the shipper, and to Westinghouse and the Commission if Seller is the receiver. The notice of disagreement shall include measurement data supporting the disagreement. If such notice of disagreement is not submitted by the receiver to the shipper, and to Westinghouse and the Commission if applicable, within sixty days, the shipper's measurements will be final and binding on both parties. The receiver shall not use, process, or dispose of the material in any manner until the difference is resolved, unless such use or disposition is mutually agreed to by Westinghouse or the Commission and Seller; provided that nothing herein shall prevent the receiver from handling the material as necessary for storage or protection against health and safety hazards.

All shipments shall be made in accordance with the terms of AEC Manual Chapter 7401.

(11) Transfer of Scrap

Material determined by the Commission to be reprocessed for recovery of the contained uranium will be shipped to a recovery contractor of the Commission or to the Commission facilities at Oak Ridge, Tennessee, as directed by Westinghouse. The shipper's original measurements shall be binding upon Westinghouse and the Commission unless a notice of disagreement from the Recovery Contractor is received by shipper, within 180 days of receipt of the material by the recovery contractor. Copies of the notice shall be concurrently mailed to Westinghouse and the Commission by the Recovery Contractor. The notice of disagreement shall include measurement data supporting the disagreement.

Prior to any shipment of scrap from Seller to a Recovery Contractor other than Oak Ridge, Seller and the Recovery Contractor shall mutually agree on procedures for ascertaining gross, tare and net weights; refraction of the material to a homogeneous mass; sampling; and determination of U-235 content from the samples. Failure to agree on procedures shall constitute a disagreement to be resolved by the Commission.

After shipment of scrap to the Recovery Contractor, it will be reduced to a homogeneous mass or masses, and four samples of each mass will be taken by the Recovery Contractor. One will be analyzed by the Recovery Contractor as the basis for the determination of U-235 content; the second will be retained by Seller for his own use until agreement has been reached; the last two samples will be retained by the Commission for possible umpire requirements. Seller may witness the Recovery Contractor's process from unsealing of the drums through taking of the samples if he so desires, and indicates such desire to the Recovery Contractor and Westinghouse at time of shipment.

(iii) Disagreements

If the disagreements identified in the above paragraphs are not resolved by mutual agreement, the following procedures shall apply:

An umpire mutually agreed to by both parties shall be selected. If, within 30 days after receipt of the notice of disagreement, the parties have not agreed to the selection of an umpire, then the Commission will appoint an umpire.

Notification of such appointment shall be given Seller in writing. Westinghouse shall contract for the services of the umpire.

The parties agree to furnish to the umpire, within 15 days after request received in writing from him, such information or samples as he may require to make his determination.

The umpire shall make his determination and findings in writing, and furnish a copy thereof to both parties. The umpire's results will be conclusive on both parties.

The party whose original measurement is furthest from the umpire's results will bear the umpire's charges; provided in the event the umpire's result is equidistant between measurements, the parties will each bear one-half of the umpire's charges. Payment for disagreements other than measurements (e.g. procedures) shall be made as determined by the umpire. Any expenses of Seller, as determined herein, shall be paid by Seller as credit against amounts payable to Seller by Westinghouse under this order.

(iv) Isotopic Enrichment (U-235)

Upon receipt of the recovered uranium, the Commission will promptly assay a sample of the material to determine U-235 isotopic enrichment. If the isotopic enrichment of the Commission sample is less than the isotopic enrichment designated in the Recovery Contractor's applicable ABC transfer document by 0.05% absolute or more, the Recovery Contractor shall be responsible, unless an isotopic analysis made by the Commission of the pertinent reserve sample of the applicable solution taken in accordance with paragraph I-C-3 of this

article shows that no dilution occurred during his processing. A representative of Seller may witness such isotopic analysis. The degree of enrichment ascertained by analysis of the reserve sample shall be conclusive and binding on the Commission, Westinghouse, Recovery Contractor and Seller as to the enrichment of the pertinent lot of material shipped by Seller for reprocessing. Seller shall be financially responsible for any loss by dilution determined to have occurred prior to the point at which that reserve sample had been taken.

(g) Fuel and Poison

(1) Westinghouse will furnish at no cost to Seller, FOB carrier Seller's Plant, acceptable fuel and poison identified in Part II, Attachment No. 7, and in the following quantities:

<u>Element Type</u>	<u>Drawing No.</u>	<u>Subassembly and Cluster Qualification Quantity</u>
	949-D-039, Items 1,2,3, & 4	Item 1. Item 2. Item 3. Item 4.
	950-D-376, Item 1	
	950-D-381, Item 1	

(2)

of these characteristics shall be replaced by Westinghouse

at no cost to Seller in the form and condition in which originally to have been furnished, whether or not rejection occurs prior to the inspection stage established in (2) (ii) below, and further provided that Seller furnishes satisfactory evidence that Seller has expended reasonable effort to pre-select [REDACTED] subsequent selective assembly.

If additional [REDACTED] Westinghouse will furnish them and Seller will be charged as follows [REDACTED]

<u>Element Type</u>	<u>Dwg. No.</u>	<u>Price</u>
[REDACTED]	949-D-039, Items 1, 2, 3, & 4	\$ 837
[REDACTED]	950-D-376 Item 1	1,264
[REDACTED]	950-D-381 Item 1	1,050

(ii) In addition to replacing rejected fuel and poison [REDACTED] Westinghouse shall pay to Seller a fixed dollar amount for each [REDACTED] in accordance with Attachment No. 8, "Schedule of Prices to be Paid by Westinghouse to Seller for Rejected Fuel [REDACTED] and in accordance with the terms and conditions herein set forth. If Seller's rejection occurs after [REDACTED] Seller should have detected the defect, Westinghouse will pay only to that inspection stage. In no event will payment exceed that amount at the last inspection stage as specified in Attachment No. 8 to the order.

(A) Payments to Seller for rejection of fuel [REDACTED] the order quality requirements for [REDACTED]

[REDACTED]

shall be made at the total of the respective prices for each completed operation performed [REDACTED] set forth in Attachment No. 8, provided Seller has satisfactorily inspected for these characteristics in accordance with the inspection methods prescribed in paragraph I of Attachment No. 8.

(B) Payments to Seller for rejection [REDACTED] of failure to meet order quality requirements [REDACTED] shall be made at the total of the respective prices

for each completed operation performed on the rejected

(C) Payments to Seller for rejection

shall be made at the total of the respective prices for each completed operation performed set forth in Attachment No. 8, provided Seller has satisfactorily inspected and tested at each prior inspection stage, in accordance with the inspection methods prescribed in paragraph I of Attachment No. 8.

(D) In the event Seller does not perform a given inspection operation as the result of an approved inspection sampling plan for failure to meet order quality requirements for the quality characteristic related to the omitted inspection operation, payments to Seller shall be limited to the total of the respective prices for each completed operation up to but not including the point in the sequence of operations where the sampled inspection operation would have been performed.

(iii) Any payments due Seller in accordance with provisions of this subparagraph (g) (2) of this Article 27 shall be reflected in an increase in total order price and shall be effected by a change notice to the order.

The provisions of this subparagraph (g) (2) of this Article 27 shall in no way relieve Seller from responsibility for complying with all requirements of the drawings, specifications and other provisions of this order, provided however, that Seller is not responsible for defects in the areas (A), (B), (C), (D), and (E) enumerated hereafter if Seller can show that such defects were not caused by Seller's processing:

- (A) Chemical composition
- (B) Mechanical properties
- (C) Corrosion properties
- (D)

(E) Fuel

Except for fuel and poison Seller shall be responsible that fuel and poison

(3) All unused [REDACTED] partially processed, rejected, and scrap and residue therefrom, except Zircaloy, will be returned to Westinghouse, or otherwise disposed of, as directed by Westinghouse. No payment will be made to Seller for materials so returned except for necessary transportation costs.

(h) Fuel [REDACTED]

(1) Westinghouse will furnish fuel [REDACTED] at no cost to Seller, FOB carrier, Seller's plant, freight prepaid.

(2) [REDACTED]

Westinghouse approved source. Westinghouse reserves the right to select the option for supply of additional material.

(3) Except as provided in 27 (a) above, Seller is financially responsible for value of any special nuclear material, and shall be charged [REDACTED] which is not returned to Westinghouse as either finished product or recoverable scrap or is not disposed of as non-recoverable scrap as hereinafter provided. Seller shall pack and ship recoverable scrap as directed by Westinghouse with freight charges for the account of Westinghouse. Seller shall dispose of non-recoverable scrap at his own expense as directed by Westinghouse. Non-recoverable scrap shall be that waste material which the Commission determines uneconomic to reprocess for recovery of SS Material. Recoverable scrap shall be that waste material which the Commission desires to reprocess for recovery of SS Material.

(4) Paragraph (f) (7) of this Article 27 also applies to material furnished per this paragraph (h).

(5) All unused fuel [REDACTED] partially processed, rejected, and scrap and residue therefrom, except Zircaloy, will be returned to Westinghouse or otherwise disposed of as directed by Westinghouse, provided however, that if Seller has obtained additional [REDACTED] may be retained by Seller for one year after core delivery, at no charge, for possible use on other AEC orders. No payment will be made to Seller for materials returned except for necessary transportation costs.

(6) Seller agrees to segregate the furnished Source and Special Nuclear Material as well as such materials which are partially processed, rejected, and scrap and residues therefrom, and further to maintain them separate from other materials in the possession of Seller.

(7) After final acceptance by Seller, Seller shall be solely responsible for such property and shall bear all risks for subsequent rejection, provided however, that, prior to final acceptance by Westinghouse of the item to be delivered under this order, if Seller can show to the satisfaction of Westinghouse that a latent defect is present, and such latent defects was in the material as supplied by Westinghouse, Westinghouse will replace the material at no cost to Seller to the original specification.

(i) Fuel [REDACTED]

(1) Westinghouse will furnish fuel [REDACTED] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. [REDACTED]

(2) If additional [REDACTED] approved by Westinghouse to the required specifications, and at Seller's expense.

(3) All [REDACTED] returned to Westinghouse provided however, that if Seller has obtained additional [REDACTED] such [REDACTED] retained by Seller for one year after core delivery, at no charge, for possible use on other AEC orders. All scrap will be disposed of by Seller at Seller's expense. No payment will be made to Seller [REDACTED]

(4) Seller agrees to segregate [REDACTED] partially processed and scrap and residues therefrom, and to further maintain them separate from other materials in Seller's possession.

(5) After final acceptance by Seller, Seller shall be solely responsible for such property and shall bear all risks for subsequent rejection, provided however, that, prior to final acceptance by Westinghouse of the item to be delivered under this order, if Seller can show to the satisfaction of Westinghouse that a latent defect is present, and such latent defect was in the material as supplied by Westinghouse, Westinghouse will replace the material at no cost to Seller to the original specification.

(j) [REDACTED]

(1) Westinghouse will furnish [REDACTED] at no cost to Seller, FOB carrier, Seller's Plant, freight prepaid. [REDACTED]

[REDACTED]

(3) Seller shall at all times [REDACTED] segregate the different types and further segregate it from other materials. Seller shall maintain segregation for this material in partially processed, rejected, and scrap and residue forms.

(4) Title [REDACTED] shall remain in the Government, except that, upon delivery and acceptance of the core, title to all the residue of such material shall vest in Seller. All scrap generated from fabrication of such material becomes the property of Seller upon delivery and acceptance of the core, and shall be disposed of at his expense.

(5) After final acceptance by Seller, Seller shall be solely responsible for such property and shall bear all risks for subsequent rejection, provided however, that prior to final acceptance by Westinghouse of the item to be delivered under this order, if Seller can show to the satisfaction of Westinghouse that a latent defect is present, and such latent defect was in the material as supplied by Westinghouse, Westinghouse will replace the material at no cost to Seller to the original specification.

(k) Zirconium Sponge

(1) The Commission will allocate for purchase by Seller, or its designee, up to 54,000 pounds of reactor grade zirconium sponge, meeting the specifications of AT(11-1)-389, for use in performance of this contract.

(2) Allocation of zirconium sponge shall be accomplished by issuance by the Commission of an Allocation Notice to National Distillers & Chemical Corp., the designated zirconium supplier. The price for sponge covered by such notice is based on the price of \$54.36 per pound for sponge meeting the specifications included in the zirconium supplier's contract with the Commission. Terms applicable to this price are payment net 30 days, FOB carrier, zirconium supplier's plant. Any price adjustment resulting from changes in specifications or applicable terms shall be as mutually agreed by Seller, or its designee, and the zirconium supplier. Shipping schedules and acceptance procedures shall be established by agreement of Seller, or its designee, and the zirconium supplier.

(3) In the event zirconium sponge cannot be made available for use by the Seller hereunder from the zirconium supplier designated by the Commission, the Commission shall designate an alternate supplier of zirconium sponge. Allocation of such substitute zirconium sponge shall be accomplished by issuance by the Commission of an Allocation Notice to the alternate supplier. In the event Seller's cost of zirconium sponge is either increased or decreased by reason of a change in the designated supplier or a change directed by the Commission in the price of zirconium sponge, an equitable adjustment shall be made in the order price, and the order shall be modified in writing accordingly.

(4) All zirconium sponge and Zircaloy required for the manufacture of the items supplied hereunder shall be purchased by the Seller under allocations made by the Commission as provided herein or shall be obtained from such other sources as may be approved by Westinghouse. Subject to prior written approval of the Commission, Seller may make such disposition as he sees fit of zirconium sponge and Zircaloy and scrap and residues thereof purchased under Allocation Notices.

(5) In the event Seller requires zirconium sponge in excess of 54,000 pounds, upon Seller's request to Westinghouse, the Commission will allocate additional sponge for purchase by Seller. For each pound of sponge allocated in excess of 54,000 pounds, Seller in addition to its payments to the zirconium supplier, shall pay to Westinghouse the difference in the price paid to the zirconium supplier and the Commission's average inventory price then in effect. Payments to Westinghouse, when required as provided for above, shall be made by credit against amounts payable to Seller by Westinghouse under this order.

28. MODULE TESTING AND INSTRUMENTATION CALIBRATION

(a) The first [REDACTED] modules and certain instrumented components are to be shipped to Westinghouse for testing and calibration in accordance with Attachment No. 6, "Special Requirements for Module Testing and Instrumentation Calibration".

(b) Shipment to Westinghouse shall be made FOB carrier, Seller's Plant, Attleboro, Massachusetts with freight collect for the account of Westinghouse. Seller shall not be liable for any loss or destruction of or damage to the components while in the possession of Westinghouse. The components will be returned at no cost to Seller, FOB carrier, Seller's plant, freight prepaid. Seller must reinspect the components and based upon such inspection Seller shall advise Westinghouse in writing of its final acceptance; provided, however, Seller shall be obligated to accept the components meeting the specification requirements including any defects which were previously approved by Westinghouse, of the order. In the event Seller fails to notify Westinghouse as to acceptance or rejection within 30 days of receipt of individual components and records, final acceptance shall be conclusively presumed. In all cases, the Westinghouse furnished containers shall be used for shipping.

(c) Seller shall provide the components to Westinghouse in such time as to allow Westinghouse at least 100 days for module testing and/or 30 days for instrumentation calibration and return to Seller without causing delay in Seller's manufacturing schedule.

29. WORK ON WESTINGHOUSE, GOVERNMENT OR OTHER PREMISES

(a) As to the work to be done, or services to be performed by Seller on Westinghouse premises, Government premises, or the premises of other Westinghouse subcontractors, the Seller assumes entire responsibility and liability for losses, expenses, damages, demands, and claims in connection with or arising out of any injury or alleged injury (including death), or damage or alleged damage to property, sustained or alleged to have been sustained in connection with or to have arisen out of performance of the work, except as provided for in Article 30. Seller will indemnify and save harmless the Government and Westinghouse from and against any and all claims, demands, actions, causes of action, suits, damages, expenses (including attorney's fees) and liabilities whatsoever resulting from or arising in any manner on account of or by reason of any injury to or death of any person or any damage to or loss of property which may occur or be alleged to have occurred as a result of or in connection with the performance of this order, whether or not resulting from the negligence of Westinghouse or the Government, except as provided for in Article 30.

(b) Seller shall procure or cause to be procured at its own expense, and shall likewise maintain or cause to be maintained, while any work is being done by Seller or any of its subcontractors under this order, insurance sufficient to protect Seller, Westinghouse and the Government against all liability with respect to bodily injury or death, or property loss or damage, which may be imposed by law upon Seller or which is assumed by Seller under this order. Such insurance shall be in such amounts, with such companies, and on such forms as are satisfactory to Westinghouse, and shall provide for at least thirty (30) days prior written notice to Westinghouse of cancellation thereof. All such policies of insurance shall contain a clause reading substantially as follows: "The insurer waives any right to subrogation against Westinghouse Electric Corporation or the United States of America which might arise by reason of any payment under this policy". Certificates of such insurance shall be furnished to Westinghouse, upon request, and Westinghouse's approval of such insurance shall be obtained prior to the commencement of any such work by or for Seller.

(c) Seller agrees to comply with all applicable laws, rules and regulations with respect to workman's compensation or occupational disease, or withholding and payment of social security and federal income taxes, and to obtain similar agreements from all of its subcontractors; and Seller further agrees to indemnify Westinghouse and the Government against, and to save and hold harmless Westinghouse and the Government from, any and all liability and expense with respect to claim against Westinghouse or the Government which may result from failure or alleged failure of Seller or of any of its subcontractors to comply therewith.

30. NUCLEAR HAZARDS INDEMNITY

Effective September 30, 1958, there was added to Contract No. AT-11-1-GEN-14 between Westinghouse and the Commission, the Commission's approved form of contract article extending "Nuclear Hazards Indemnity" as authorized by the Price-Anderson Act (Section 170 of the Atomic Energy Act of 1954, as amended). This article, in accordance with its terms, indemnifies Westinghouse and other

persons indemnified against claims for public liability, up to \$500,000,000 in the aggregate, resulting from the occurrence of a nuclear incident as those terms are defined in the contract article. The extension of coverage to "other persons indemnified" means that the Commission indemnifies, in accordance with the provisions of the article, persons other than Westinghouse who may be liable for public liability for a nuclear incident which takes place at a contract location, as defined in the article or involves products (including design and other technical data) furnished or delivered under Contract No. AT-11-1-GEN-14. Whatever indemnity to Seller is provided by this Article 30 shall take precedence over any other assumptions of risks by Seller that may be expressed elsewhere in this order. Upon request, Westinghouse will inform Seller of any change to or discontinuance of the Nuclear Hazards Indemnity extended under AT-11-1-GEN-14, or any change of the designated [REDACTED]

31. COMPLIANCE WITH LAWS, REGULATIONS AND REQUIREMENTS

(a) Walsh-Healey Public Contracts Act

To the extent that this order is subject to the Walsh-Healey Public Contracts Act, as amended (41 U.S. Code 35-45), there are hereby incorporated by reference and representations and stipulations required by said Act and regulations issued thereunder by the Secretary of Labor such representations and stipulations being subject to all applicable rulings and interpretations of the Secretary of Labor which are now or may hereafter be in effect.

(b) Eight-Hour Law

This order, to the extent that it is of a character specified in the Eight-Hour Law of 1912, as amended (40 U. S. Code 324-326) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. Code 35-45), is subject to the following provisions and exceptions of said Eight-Hour Law of 1912 as amended, and to all other provisions and exceptions of said Law:

- (1) No laborer or mechanic doing any part of the work contemplated by this order, in the employ of Seller or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this article. The wages of every laborer and mechanic employed by Seller or any subcontractor engaged in the performance of this order shall be computed on a basic day rate of eight hours per day and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at no less than one and one-half times the basic rate of pay. For each violation of the requirements of this article a penalty of five (\$5.00) dollars shall be imposed for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this article, and all penalties thus imposed shall be withheld for the use and benefit of the Government.

(c) Notice of Labor Disputes

Whenever an actual or potential labor dispute is delaying or threatens to delay the performance of the work Seller shall immediately notify Westinghouse in writing. Such notice shall include all relevant information concerning the dispute and its background.

(d) Convict Labor

In connection with the performance of work under this order Seller shall not employ any person undergoing sentences of imprisonment at hard labor.

(e) Covenant Against Contingent Fees

Seller warrants that no person or selling agency has been employed or retained to solicit or secure this order upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by Seller for the purpose of securing business. For breach or violation of this warranty Westinghouse or the Government shall have the right to annul this order without liability or in its discretion to deduct from the order price or consideration or otherwise recover the full amount of such commission, percentages, brokerage, or contingent fee.

(f) Officials Not to Benefit

No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this order or to any benefit that may arise therefrom but this provision shall not be construed to extend to this order if made with a corporation for its general benefit.

(g) Buy-American Act

(1) In acquiring end products, the Buy American Act (41 U. S. Code 10 a-d) provides that the Government give preference to domestic source end products. For the purpose of this article:

(i) "Components" means those articles, materials, supplies, which are directly incorporated in the end products;

(ii) "End Products" means those articles, materials, and supplies, which are to be acquired under this order for public use; and

(iii) A "domestic source end product" means (A) an unmanufactured end product which has been mined or produced in the United States and (B) an end product manufactured in the United States if the cost of the components thereof which are mined, produced, or manufactured in the United States exceeds 50 percent of the costs of all its components. For the purpose of this (1) (iii) (B), components of foreign origin of the same type or kind as the products referred to in (2) (ii) or (iii) of this article shall be treated as components mined, produced, or manufactured in the United States.

(2) Seller agrees that there will be delivered under this order only domestic source end products, except end products:

(i) Which are for use outside the United States;

(ii) Which the Government determines are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality;

(iii) As to which the cognizant Government agency determines the domestic performance to be inconsistent with the public interest; or

(iv) As to which the cognizant Government agency determines the cost to the Government to be unreasonable.

(The foregoing requirements are administered in accordance with Executive Order No. 10582 dated December 17, 1954.)

(h) Reporting of Royalties

If any royalty payments are directly involved in the order or are reflected in the order price, Seller agrees to report in writing to Westinghouse during the performance of this order and prior to its completion or final settlement the amount of any royalties or other payments paid or to be paid by it directly to others in connection with the performance of this order together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit identification to the patents or other basis on which the royalties are to be paid. The approval of Westinghouse of any individual payments or royalties shall not estop the Government at any time from contesting the enforceability, validity or scope of, or title to, any patent under which a royalty or payments are made. If no royalties or other payments are paid directly to others, Seller agrees so to report in writing to Westinghouse prior to the completion or final settlement of this order.

(i) Permits

Except as otherwise directed by Westinghouse, Seller shall procure all necessary permits or licenses and abide by all applicable laws, regulations, and ordinances of the United States and of the State, territory, and political subdivision in which the work under this order is performed.

32. REPORTS

Seller shall submit full and current reports of all work done and the results thereof in the manner, at the times, and to the extent set forth in the order; provided that, unless otherwise specified in the order, Seller shall submit such reports in triplicate from time to time as requested and upon completion (or earlier termination) of the work.

33. PUBLIC RELEASE OF INFORMATION

(a) All information, data, photographs, sketches, advertising, etc., relating to the work under this purchase order which Seller desires to release or publish shall be submitted to Westinghouse in 12 copies for approval eight weeks prior to the desired release date. As part of the approval request, Seller shall identify the specific media to be used as well as other pertinent details of the proposed release.

(b) Seller agrees to insert in all subcontracts under this order, provisions which shall conform substantially to the language of this Article, including this paragraph (b).

34. COPYRIGHT

(a) Seller agrees that the Commission shall determine the disposition of the title to and the rights under any copyright secured by Seller or its employees on copyrightable material first produced or composed and delivered to Westinghouse under this order. Seller agrees to and does hereby grant to the Government and Westinghouse on behalf of the Government and to their officers, agents, and employees acting within the scope of their official duties, a royalty free, non-exclusive and irrevocable license throughout the world to reproduce, translate, publish, use and dispose of and to authorize others so to do, all copyrightable work not first produced or composed by Seller in the performance of this order but which is incorporated in the material furnished under the order; provided, that such license shall be only to the extent Seller now has, or prior to the completion or final settlement of the order may acquire the right to grant such license without becoming liable to pay compensation to others solely because of such grant.

(b) Seller agrees that it will not include any copyrighted material in any written or copyrightable material furnished or delivered under this order without a license as provided for in paragraph (a) of this article, or without the consent of the copyright owner, unless specific written approval of the Commission to the inclusion of such copyrighted material is requested.

35. RIGHTS IN DRAWINGS, DESIGNS, SPECIFICATIONS, ETC.

(a) All drawings, sketches, designs, design data, specifications, notebooks, technical and scientific data, and all photographs, negatives, reports, findings, recommendations, data and memoranda of every description relating thereto, as well as all copies of the foregoing relating to the work or any part thereof including such of the foregoing as are furnished to Seller by Westinghouse and those prepared, developed or furnished by Seller in the course of, in connection with or under the order, shall be subject to inspection by Westinghouse or the Government at all reasonable times (for which inspection the proper facilities shall be afforded by Seller and its subcontractors), shall be the property of the Government and may be used by the Government for any purpose whatsoever without any claim on the part of Seller and its subcontractors and vendors for additional compensation and shall be delivered to Westinghouse, or otherwise disposed of by Seller either as Westinghouse may from time to time direct during the progress of the work or in any event as Westinghouse shall direct upon completion or termination of this order. Provided, however that any and all such matters relating to novel manipulative techniques and processes which are not patentable inventions shall be the property of Seller, subject to the right of the Government to use and have used such techniques and processes for Governmental purposes; and provided further, however, that any knowledge or information relating to such techniques and processes which is proprietary to Seller and is so designated in writing by Seller at the time of disclosure thereof to Westinghouse shall not be disclosed to others by Westinghouse or the Commission, except that the Commission may, notwithstanding the foregoing, at any time disclose to others: (1) such knowledge or information necessary in the opinion of the Commission to performance by such others of contracts with the Commission or of subcontracts under such contracts; (2) such knowledge or

information obtained by the Commission from sources (including other agencies of the Government) to whom Seller has not disclosed such knowledge or information; (3) such knowledge or information already in the possession of the Commission prior to disclosure thereof by Seller; and (4) such knowledge or information as may be in the public domain otherwise than as a consequence of a breach of the obligation herein undertaken to maintain such information in a confidential status.

(b) Subject to the security and patent provisions of this order, Seller shall be permitted to retain copies of material referred to in Section (a) of this Article. Use of such material and information, except matters relating to those proprietary techniques and processes designated in writing by Seller as provided for in Section (a) hereof, is restricted to the use by Seller, its subcontractors and vendors in connection with the work under this order and, unless prior written approval is obtained from Westinghouse, Seller, its subcontractors and vendors shall not, at any time during or after performance of this order, (1) use any of said Government-owned material or information in the design, manufacture, production, evaluation, testing or sale of equipment or supplies of the kind specified to be delivered under this order, or of any component parts thereof, or of any model of any such equipment, supplies or component part, or (2) transfer copies of, or otherwise disclose, to others (including corporate affiliates of Seller, its subcontractors and vendors) any of said Government-owned material or information. Except as authorized in writing by Westinghouse, Seller shall insert provisions in all subcontracts and purchase orders hereunder, which will limit the use and transfer of Government-owned material and information in accordance with the requirements of this Section (b). With respect to those proprietary techniques and processes designated in writing by Seller as provided for in Section (a) hereof, Seller shall not at any time during or after the performance of this order disclose to others (including corporate affiliates of Seller, its subcontractors and vendors), or permit such others to use, any of said techniques or processes unless prior written approval is obtained from Westinghouse.

36. PATENT RIGHTS

(a) Whenever any invention or discovery is made or conceived by Seller or its employees in the course of or under this order, Seller shall furnish Westinghouse for transmission to the Commission complete information thereon; and the Commission shall have the sole power to determine whether or not and where a patent application shall be filed, and to determine the disposition of the title to and the rights under any application or patent that may result. The judgment of the Commission on these matters shall be accepted as final; and Seller for itself and for its employees agrees that the inventor or inventors will execute all documents and do all things necessary or proper to carry out the judgment of the Commission.

(b) No claim for pecuniary award or compensation under the provisions of the Atomic Energy Acts of 1946 and 1954 shall be asserted by Seller or its employees with respect to any invention or discovery made or conceived in the course of, or under this order.

(c) Except as otherwise authorized in writing by the Commission, Seller will obtain patent agreements to effectuate the purposes of paragraphs (a) and (b) of this Article from all persons who perform any part of the work under this contract, except such clerical and manual labor personnel as will not have access to technical data.

(d) Except as otherwise authorized in writing by the Commission, Seller will insert in all subcontracts provisions making this Article applicable to the subcontractor and its employees.

37. PATENT CLEARANCE FOR RELEASE OF UNCLASSIFIED TECHNICAL MATERIAL

It is recognized that during the course of the work hereunder or subsequent thereto, Seller or its employees may from time to time desire to publish, within the limits of security requirements, information regarding technical or scientific developments arising in the source of the order. In order that public disclosure of such information will not adversely affect the patent interests of the Government, patent approval for release shall be secured from Westinghouse prior to any such publication.

38. PATENT INDEMNITY

Seller agrees to indemnify Westinghouse and the Government, their officers, agents, servants and employees against liability of any kind (including costs and expenses incurred) for the use of any invention or discovery and for the infringement of any United States Letter Patent (not including liability arising pursuant to Section 183, Title 35 (1952), U. S. Code, prior issuance of Letters Patent) occurring in the performance of this order or arising by reason of the use or disposal by or for the account of the Government of items manufactured or supplied under this order, except, however, any infringement necessarily resulting from Seller's compliance with written specifications or provisions for other than standard parts or components manufactured or supplied by Seller or resulting from specific written instructions given by the Government or Westinghouse for the purpose of directing a manner of performance of the order not normally utilized by Seller.

39. NOTICE AND ASSISTANCE REGARDING PATENT INFRINGEMENT

(a) Seller shall report to Westinghouse, promptly and in reasonable written detail, each notice or claim for patent infringement based on the performance of this order of which Seller has knowledge.

(b) In the event of any suits against Westinghouse or the Government, or any claim against Westinghouse or the Government made before suit has been instituted, on account of any alleged patent infringement arising out of the performance of this order or out of the use of any supplies furnished or work or services performed hereunder, Seller shall furnish to Westinghouse or the Government upon request, all evidence and information in possession of Seller pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except in those cases in which Seller has agreed to indemnify Westinghouse and the Government against the claim being asserted.

40. SMALL BUSINESS AND LABOR SURPLUS AREA SUBCONTRACTING PROGRAM

(a) Seller agrees to establish and conduct a program to afford small business concerns and labor surplus area concerns an equitable opportunity to compete for subcontracts within their capabilities. In this connection, Seller shall:

(1) Designate a liaison officer, who will (i) maintain liaison with Westinghouse and SBA on small business matters and with duly authorized representatives of the Government on labor surplus area matters, (ii) supervise compliance with the "Utilization of Small Business Concerns," and "Utilization of Concerns in Labor Surplus Areas" clauses, and (iii) administer Seller's Small Business and Labor Surplus Area Program. (If deemed necessary, separate liaison officers may be appointed for small business matters and for labor surplus area matters);

(2) Provide adequate and timely consideration of the potentialities of small business concerns and labor surplus area concerns in all "make-or-buy" decisions;

(3) Assure that small business concerns and labor surplus area concerns will have an equitable opportunity to compete for subcontracts, particularly by arranging solicitations, time for preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of small business concerns and labor surplus area concerns;

(4) Maintain records showing (i) whether each prospective subcontractor is a small business concern and (ii) procedures which have been adopted to comply with the policies set forth in this clause;

(5) Include the "Utilization of Small Business Concerns" and "Utilization of Concerns in Labor Surplus Areas" clauses in subcontracts which offer substantial small business or labor surplus area subcontracting opportunities; and

(6) Submit such information on subcontracting to small business concerns and labor surplus area concerns as is called for by Westinghouse.

(b) A "small business concern" is a concern that (1) is certified as a small business concern by the Small Business Administration, or (2) is independently owned and operated, is not dominant in its field of operation and, with its affiliates, employs either not more than 500 employees or, if the concern qualifies as a labor surplus area concern, not more than 625 employees.

(c) A "labor surplus area concern" is a concern which will perform, or cause to be performed, a substantial proportion of any contract awarded to it in "Areas of Substantial Labor Surplus" (also called "Areas of Substantial Unemployment"); so designated by the Department of Labor. A concern shall be deemed to perform a substantial proportion of a contract in a labor surplus area if the costs that the concern will incur on account of manufacturing

or production performed in persistent or substantial labor surplus areas (by itself or its first-tier subcontractors) amount to more than 50 percent of the price of such order.

(d) Seller further agrees to insert in any subcontract hereunder which is in excess of \$1,000,000 and which contains the clauses entitled "Utilization of Small Business Concerns" and "Utilization of Concerns in Labor Surplus Areas" provisions which shall conform substantially to the language of this clause, including the paragraph (d).

(e) Utilization of Small Business Concerns

(1) It is the policy of the Government as declared by the Congress that a fair proportion of the purchases and contracts for supplies and services for the Government be placed with small business concerns.

(2) Seller agrees to accomplish the maximum amount of subcontracting to small business concerns that Seller finds to be consistent with the efficient performance of this order.

(f) Utilization of Concerns in Labor Surplus Areas

It is the policy of the Government to place supply contracts with suppliers who will perform such contracts substantially in areas of persistent or substantial labor surplus where this can be done, consistent with the efficient performance of the contract, at prices no higher than are obtainable elsewhere. Seller agrees to use his best efforts to place his subcontracts in accordance with this policy. In complying with the foregoing and with paragraph (2) of the article of this order entitled "Utilization of Small Business Concerns", Seller in placing his subcontracts shall observe the following order preference: (i) persistent labor surplus area concerns which are also small business concerns; (ii) other persistent labor surplus area concerns; (iii) substantial labor surplus area concerns which are also small business concerns; (iv) other substantial labor surplus area concerns; and (v) small business concerns which are not labor surplus area concerns.

41. GUARANTOR

The Guarantor hereby guarantees the performance of all obligations which the Seller (a) has assumed under this order or (b) which the Seller may hereafter undertake under this order as it may hereafter be amended or modified by its duly authorized officers or agents; and the guarantor hereby waives notice of and consent to any such amendment or modification.

42. CHANGE NOTICE PRICING

Pricing of changes made by Westinghouse to the order pursuant to the Change Article may, at the option of Westinghouse, be determined by mutual agreement between Westinghouse and Seller as to the various hours and purchased cost entailed by the change, and application of the following rates and adders to the hours and purchased cost.

Manufacturing Direct Labor / Factory Overhead	=	\$5.70 per hour
Engineering Direct Labor / Factory Overhead	=	7.90 per hour
Quality Control Direct Labor / Factory Overhead	=	4.80 per hour
Material		<u>Cost</u>
Product Cost	=	XXX
Direct and Allocable Expense:		
On Direct Labor and Overhead (42.6%)	=	XXX
On Materials (16.0%)	=	XXX
Operating Cost	=	XXXX
Corporate G&A (1.3% Operating Cost)	=	XXX
Total Cost	=	XXX
Profit at 10% of price	=	XXX
Quoted Price	=	XXXX



Any rates negotiated with the Commission for use on Pittsburgh Naval Reactors Office contracts during the course of this order will be used for the period in question. *PROVIDED WE ELECT TO UTILIZE THE PRICING FORMULA CONTAINED HEREIN.*

43. OPTIONAL WORK

(a) Westinghouse reserves the right to add any or all the following work to the order at the prices and deliveries noted; and to require performance of such work in accordance with the terms and specifications of the order. Addition of such work shall be accomplished by change notice to the order.

(1) Option #1

Fabrication of a complete extra set of support tube seal block assemblies, consisting of the following:

<u>Type</u>	<u>Drawing</u>	<u>Quantity</u>
	923F157, Gr. 1	
	923F145, Gr. 1	
An assembly of:	923F103, Pc. 1	
	923F115, Pc. 1	
	918F904, Pc. 8	

<u>Type</u>	<u>Drawing</u>	<u>Quantity</u>
[REDACTED]	An assembly of: 923F103, Pc. 1 923F116, Pc. 1 918F904, Pc. 8	[REDACTED]
[REDACTED]	An assembly of: 923F141, Pc. 1 923F123, Pc. 1 918F904, Pc. 8	[REDACTED]

For the fabrication of the above and for weld qualification requirements for MX-0007, Westinghouse will furnish the following nickel-chrome-iron alloy material at no cost to Seller, FOB Carrier, Seller's Plant, freight prepaid:

<u>No. of Pieces</u>	<u>Specification</u>	<u>Size in Inches</u>
24	M11-N-22987	9-1/2 x 9-1/2 x 40
1	M11-N-22987	9-1/2 x 9-1/2 x 80
19	[REDACTED]	10-1/4 x 11-1/4 x 10-1/4
4	[REDACTED]	15 x 11 x 15-1/2
12	[REDACTED]	10-1/4 x 11-1/4 x 15-1/2
25	[REDACTED]	8 x 8 x 6

Seller shall also fabricate an additional set of peripheral seal bars and hardware per drawing 923J236, Group 2. Seller will ship the seal bars and hardware only as directed by Westinghouse. Westinghouse will then furnish to Seller, FOB Carrier, Seller's Plant, freight prepaid, one adapter flange assembly per 923J236, Group 1. Seller shall assemble the support tube seal blocks into the adapter flange assembly and shall weld the assembly per the superstructure drawing 922J720. Seller shall pack and package the welded assembly and ship as directed by Westinghouse.

The price for this optional work shall be [REDACTED] The delivery shall be 12 weeks after receipt of Westinghouse-furnished starting material.

(2) Option #2

Seller shall provide die forged blocks for the seal blocks and peripheral seal bars. No additional material will be furnished to Seller for this option. The price addition shall be [REDACTED] and the core and spares delivery shall be unchanged.