

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES <b>1</b> <b>71</b>
2. AMENDMENT/MODIFICATION NO. <b>216</b>	3. EFFECTIVE DATE (M/D/Y) <b>See Block 16C</b>	4. REQUISITION/PURCHASE REQ. NO. <b>11EM002285</b>	5. PROJECT NO. (If applicable)
6. ISSUED BY <b>U.S. Department of Energy Office of River Protection P. O. Box 450, MS H6-60 Richland, WA 99352</b>	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP code) <b>Bechtel National, Inc. 2435 Stevens Center Place Richland, WA 99354</b>		<input type="checkbox"/>	9A. AMENDMENT OF SOLICITATION NO.
		<input type="checkbox"/>	9B. DATED (SEE ITEM 11)
		<input checked="" type="checkbox"/>	10A. MODIFICATION OF CONTRACT/ ORDER NO. <b>DE-AC27-01RV14136</b>
		<input checked="" type="checkbox"/>	10B. DATED (SEE ITEM 13) <b>December 11, 2000</b>
CODE <b>396A5</b>	FACILITY CODE <b>153392068</b>		

**11. THIS ITEM APPLIES TO AMENDMENTS OF SOLICITATIONS**

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

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

12. ACCOUNTING AND APPROPRIATION DATA (If required)

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

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO AUTHORITY OF FAR 43.103(b).
<input checked="" type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO THE AUTHORITY OF: Clause I.82, FAR 52.243-2 CHANGES - COST REIMBURSEMENT (AUG 1987) - ALTERNATE III (APR 1984)
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

**E. IMPORTANT: Contractor  is not,  is required to sign this document and return 2 copies to the issuing office.**

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

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

15A. NAME AND TITLE OF SIGNER (Type or print) <b>Frank M. Russo Project Director</b>	15A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) <b>George F. Champlain Contracting Officer</b>
15B. CONTRACTOR/OFFEROR <b>ORIGINAL SIGNED BY</b> <i>(Signature of person authorized to sign)</i>	15C. DATE SIGNED <b>5/17/11</b>
15B. CONTRACTOR/OFFEROR <b>ORIGINAL SIGNED BY</b> <i>(Signature of Contracting Officer)</i>	15C. DATE SIGNED <b>19 May 2011</b>

**Purpose of Modification:**

The purpose of this modification is to revise Section B, *Supplies or Services and Prices/Costs*, and Section J, *List of Attachments*, to incorporate the Schedule Incentive Fee Activity Milestone Definition Sheets into the contract.

**Description of Modification:**

1. Section B, *Supplies or Services and Prices/Costs*, is modified as follows:

a) Clause B.11 ATTACHMENTS, ATTACHMENT B-2-C – INCENTIVE FEE C – Schedule Incentive Fee, language is changed:

FROM: All Schedule Incentive Fees are milestones that represent and measure progress toward achieving the Contract as set forth in the PEMP and do not represent payment for the specific named milestone itself. Schedule Incentive Fee Definitions are set forth in the PEMP.

TO: All Schedule Incentive Fees are milestones that represent and measure progress toward achieving the Contract as set forth in **Section J, Attachment P of the contract** and do not represent payment for the specific named milestone itself. Schedule Incentive Fee Definitions are set forth in **Section J, Attachment P of the contract**.

b) Clause B.11 ATTACHMENTS, C.1 ACTIVITY MILESTONE COMPLETION, fourth sentence of the paragraph is changed:

FROM: The fee will be earned and payable when the Contracting Officer determines the milestone has been completed in accordance with the Activity Milestone Definition Sheets set forth in the PEMP.

TO: The fee will be earned and payable when the Contracting Officer determines the milestone has been completed in accordance with the Activity Milestone Definition Sheets set forth in **Section J, Attachment P of the contract**.

c) Clause B.11 ATTACHMENTS, C.1 ACTIVITY MILESTONE COMPLETION, table entitled, "INCENTIVE C.1 – ACTIVITY MILESTONE COMPLETION INCENTIVE FEE" is revised to update the Description column for Facility HLW-10:

FROM: Set Offgas Cat Oxidizers: HOP-SCO-2 and 3

TO: Set Offgas Cat Oxidizers: HOP-SCO-1 and 4

d) Clause B.11 ATTACHMENTS, C.1 ACTIVITY MILESTONE COMPLETION, Table entitled, “INCENTIVE C.1 – ACTIVITY MILESTONE COMPLETION INCENTIVE FEE” is revised to update the Description column for Facility BOF-05:

FROM: Complete elec Distrib Sys Testing LVE / MVE (Site Energization)

TO: Complete elec Distrib Sys Testing MVE (Site Energization)

2. Section J, *List of Attachments*, is modified as follows:

a) Section J, *List of Attachments*, TABLE OF CONTENTS, page J – ii, is revised to incorporate Attachment P, Completion Definition Sheets for Incentive Fee C.1 Activity Milestone Completion Incentive.

b) Attachment P, table entitled, “INCENTIVE C.1 – ACTIVITY MILESTONE COMPLETION INCENTIVE FEE COMPLETED MILESTONES”, is incorporated herein.

c) Attachment P, table entitled, “INCENTIVE C.1 – ACTIVITY MILESTONE COMPLETION INCENTIVE FEE TO-BE COMPLETED MILESTONES”, is incorporated herein.

d) The Activity Milestone Definition Sheets for the 48 Activity Milestones to-be completed are incorporated herein.

**SECTION J  
 ATTACHMENT P  
 COMPLETION DEFINITION SHEETS FOR INCENTIVE FEE C.1 ACTIVITY  
 MILESTONE COMPLETION INCENTIVE**

The following Activity Milestones have been earned and schedule incentive fee paid as of modification 216.

**INCENTIVE C.1 - ACTIVITY MILESTONE COMPLETION INCENTIVE FEE  
 COMPLETED MILESTONES**

Facility	Milestone Designation	Function	Description	Date Approved	CY	Fee Amount
LAB-01	1GT00E0918	Engineering	Title II Design Complete	05/18/09	2009	\$ 3,875,000
BOF-04	1GB16C1050	Construction	Complete Installation of Cathodic Protection System	07/14/10	2010	\$ 3,875,000
PTF-02	1GP12CFM02	Engineering	IFC Drawings for Concrete Walls EL 56 - 77 Ft	06/01/09	2009	\$ 3,875,000
LAB-02	1GT48P0921	Plant Equip	Receive Waste Transfer System Equipment	02/25/10	2010	\$ 3,875,000
LAW-06	1GL14C0915	Construction	Erect Switchgear Building	12/14/09	2009	\$ 3,875,000
HLW-02	1GH48P0942	Plant Equip	Receive and Accept Melter Cave 1 Crane Maintenance Shield Door HSH-DOOR-05	12/08/09	2009	\$ 3,875,000
PTF-01	1GP14CFM01	Engineering	DOE Approval of M-12 Closure	01/06/10	2010	\$ 3,875,000
HLW-05	1GH13C1145	Construction	Erect Structural Steel EL 0 Ft - EL 14 Ft	03/30/10	2010	\$ 4,428,000
PTF-03	1GP15CFM03	Engineering	PD Rack Design - IFC Complete	12/17/10	2010	\$ 4,428,000
LAB-04	1GT47P1036	Plant Equip	Receive Autosampler (ASX) Equipment	10/28/10	2010	\$ 4,428,000
HLW-01	1GHZZE0941	Engineering	Complete HVAC Design (Title II)	07/28/10	2010	\$ 4,428,000
HLW-03	1GHZZE1043	Engineering	Civil Engineering Design Complete (Title II)	03/15/11	2011	\$ 2,500,000
<b>SUBTOTAL</b>						<b>\$ 47,337,000</b>

**INCENTIVE C.1 - ACTIVITY MILESTONE COMPLETION INCENTIVE FEE  
TO-BE COMPLETED MILESTONES**

Facility	Milestone Designation	Function	Description	Date	CY	Fee Amount
LAW-01	1GL47P0922	Plant Equip	Receive Offgas Mercury Adsorber, PA #09-A EL +48	10/19/09	2009	\$ 3,875,000
LAW-03	1GL46P1030	Plant Equip	Melter #2 Lid+Bal of Components Ready for Assembly	06/15/10	2010	\$ 4,428,000
BOF-02	1GB5MC1043	Construction	Complete Construction Water Treatment Building	07/27/10	2010	\$ 4,428,000
LAW-02	1GL36P1027	Plant Equip	CATOX LVP-SKID-0002 Received +Ready to Install	10/06/10	2010	\$ 4,428,000
HLW-04	1GH36P1044	Plant Equip	Receive and Accept Plant Wash Vessel: RLD-VSL-8	02/16/11	2011	\$ 2,500,000
BOF-01	1GB47P1040	Plant Equip	Receive Anhydrous Ammonia System	02/25/11	2011	\$ 2,500,000
PTF-04	1GP30CFM04	Construction	Set Hot Cell Frames for Areas 1, 24, and 25	07/19/11	2011	\$ 2,500,000
HLW-09	1GH27C1249	Construction	Set HEPA Filter Housing Installation at EL 14 Ft	08/31/11	2011	\$ 2,500,000
LAB-03	1GT47C1356	Construction	Complete Installation of Autosampler System	10/10/11	2011	\$ 2,500,000
HLW-07	1GH15C1247	Construction	Complete Pipe and Hanger Installation in PA06	12/06/11	2011	\$ 2,500,000
HLW-10	1GH36C1250	Construction	Set Offgas Cat Oxidizers: HOP-SCO-1 and 4	12/07/11	2011	\$ 2,500,000
PTF-09	1GP31CFM09	Construction	Set PT Vessel FEP-SEP-00001A/1B in Planning Area 02	01/10/12	2012	\$ 2,858,000
PTF-05	1GPZZCFM05	Engineering	C&I Design Complete	03/14/12	2012	\$ 2,858,000
BOF-03	1GB5JC1046	Construction	Complete Chiller Compressor Plant Construction	03/22/12	2012	\$ 2,858,000
HLW-06	1GH47C1146	Construction	Set Offgas Carbon Adsorber	05/31/12	2012	\$ 2,858,000
PTF-08	1GP30CFM08	Construction	Set Remaining Pretreatment Vessel at EL 0 Ft	08/27/12	2012	\$ 2,858,000
PTF-07	1GPZZCFM07	Engineering	Electrical Design Complete	09/04/12	2012	\$ 2,858,000
HLW-11	1GH27C1351	Construction	Installation of HVAC Duct at EL 0 Ft Corridors	11/15/12	2012	\$ 2,858,000
BOF-06	1GB12C1253	Construction	Complete Emergency Diesel Generator Base Slab	03/14/13	2013	\$ 2,500,000
PTF-10	1GP12CFM10	Construction	Complete Concrete Slabs at EL 56 Ft	03/19/13	2013	\$ 2,500,000
HLW-12	1GH14C1352	Construction	Complete Annex Building Weathering	04/30/13	2013	\$ 2,500,000
PTF-11	1GP12CFM11	Construction	Complete 5th Lift Walls	05/09/13	2013	\$ 2,500,000
HLW-13	1GH46C1453	Construction	Set HEME Vessels 2A and 2B at EL 0 Ft	06/12/13	2013	\$ 2,500,000
PTF-14	1GP30CFM14	Construction	Set Filter Cave HEME / HEPA / Demister Equipment	11/05/13	2013	\$ 2,500,000
PTF-06	1GP47CFM06	Plant Equip	Receipt of all PSA Pipe Racks	11/12/13	2013	\$ 2,500,000
HLW-08	1GH15C1248	Construction	Install Pipe and Hangers in PA02B	12/04/13	2013	\$ 2,500,000
PTF-16	1GP15CFM16	Construction	Complete Bulk In-cell Pipe Installation	01/30/14	2014	\$ 3,333,000
PTF-15	1GP28CFM15	Plant Equip	Receipt of Electrical Equipment in Control Building Electrical Rooms	04/03/14	2014	\$ 3,333,000
HLW-16	1GH27C1556	Construction	Set C2V/C3V Air Handling Units at EL 58 Ft	04/21/14	2014	\$ 3,333,000
PTF-13	1GP27CFM13	Construction	Air Handling Units EL 98 Ft	05/23/14	2014	\$ 3,333,000
PTF-12	1GP14CFM12	Construction	Install Roofing at EL 98 Ft	10/28/14	2014	\$ 3,333,000
PTF-18	1GP30CFM18	Construction	Set Hot Cell Major Equipment	10/30/14	2014	\$ 3,333,000
LAW-04	1GL00C1505	Construction	Complete Melter #1 Movement into Building	01/07/15	2015	\$ 1,667,000
HLW-14	1GH12C1454	Construction	Placement of HLW Concrete Slabs at EL 58 Ft	01/12/15	2015	\$ 1,667,000
PTF-19	1GP14CFM19	Construction	Complete Main Building Weathering	02/04/15	2015	\$ 1,667,000
LAW-05	1GL00C1515	Construction	Complete Melter #2 Movement into Building	03/09/15	2015	\$ 1,667,000
PTF-17	1GP11CFM17	Engineering	Complete Pretreatment Design	03/24/15	2015	\$ 1,667,000
HLW-15	1GH46C1555	Construction	Move Melter 1 into Building	04/22/15	2015	\$ 1,667,000
BOF-07	1GB28C1360	Construction	Set (2) Emergency Diesel Generators	05/26/15	2015	\$ 1,667,000
BOF-05	1GBC2S1463	Start Up	Complete Elec Distrib Sys Testing MVE (Site Energization)	05/29/15	2015	\$ 1,667,000
HLW-17	1GH14C1557	Construction	Complete Main Building Weathering	06/16/15	2015	\$ 1,667,000
PTF-21	1GPC2CFM21	Construction	Construction Turnover of PIH Crane to Startup	08/10/15	2015	\$ 1,667,000
PTF-22	1GPC2CFM22	Start Up	Demonstration of Resin Addition to Ion Exchange Columns	10/19/15	2015	\$ 1,667,000
PTF-20	1GPC0CFM20	Construction	Final System Turnover Complete	11/30/15	2015	\$ 1,667,000
<b>SUBTOTAL</b>						<b>\$ 114,667,000</b>

**INCENTIVE C.1 - ACTIVITY MILESTONE COMPLETION INCENTIVE FEE  
TO-BE COMPLETED MILESTONES**

Facility	Milestone Designation	Function	Description	Date	CY	Fee Amount
			<b>SUBTOTAL (from prior page)</b>			<b>\$114,667,000</b>
HLW-18	1GH00C1558	Construction	Construction Commence Turnover to Startup (Elec Sys Package)	05/26/16	2016	\$ 2,749,000
PTF-23	1GPE2CFM23	E&NS	Submit FSAR 2016 Update	06/29/16	2016	\$ 2,749,000
HLW-20	1GHC2S1660	Construction	Final System Turnover Complete	09/22/16	2016	\$ 2,749,000
HLW-19	1GHC2S1659	Start Up	Demonstrate Canister Lid Weld	12/21/16	2016	\$ 2,749,000
<b>TOTAL</b>						<b>\$125,663,000</b>

The Activity Milestone Definition Sheets (Contract Fee Milestones) included in Section J, Attachment P herein are only those associated with To-Be Completed Activity Milestones.

**CONTRACT FEE MILESTONES**

The following conditions apply to all non-time-dependent fee-bearing milestones

- Key predecessor activities listed on the milestone sheets will be complete.
- Bechtel will notify DOE-WTP within five days of milestone completion and provide supporting documentation within 20 days of completion.
- DOE-WTP will confirm completion within 30 days of receiving the documentation.
- Bechtel will provide a listing of any milestone exceptions and open quality documents (including punch lists, construction deficiency reports, non-conformance reports, field changes, and vendor documentation) that do not functionally impact or impede successor activities, along with justification for each one.
- DOE-WTP has the final authority for the acceptance of milestone completions subject to the dispute provisions of the contract.
- Any changes that occur after the achievement of the milestone will not invalidate completion.
- All documents (including memos providing copies of interim documents), drawings, calculations, and specifications will be available for review in Project Document Control and will be readily accessible to DOE-WTP.

**Contract Fee Milestones**  
**PTF-04**

Facility	Activity ID	Description
PTF	1GP30CFM04	Set Hot Cell Frames for Areas 1, 24, and 25

**Milestone Definition**

Set into final location the upper and lower support frames located at elevation 0 ft, in areas 1, 24, and 25 of the hot cell room number P-0123, column lines 4 through 24, and E through H (reference PA21).

Area 1 Upper Frame Tag Ref. FRP-JMPS-10002	Area 1 Lower Frame Tag Ref. FRP-JMPS-10001
Area 24 Upper Frame Tag Ref. FRP-JMPS-10004	Area 24 Lower Frame Tag Ref. FRP-JMPS-10003
Area 25 Upper Frame Tag Ref. FEP-JMPS-10003	Area 25 Lower Frame Tag Ref. FEP-JMPS-10001

Inclusions

1. Installation and inspection acceptance of the as-designed upper and lower support frames listed above in their final location including final attachment to the building structure support.
2. Installation of liner plate required to be completed for installation of the frames.

Exclusions

1. Installation of items agreed as unsuitable to be installed in a construction environment and could be subject to potential damage.
2. Equipment located on the support frames and associated jumpers.
3. Removal of any temporary construction aids where it can be demonstrated that these are required for follow-on construction activities and they do not impact the follow-on construction activities.
4. Open punch list items and open nonconformance reports, construction deficiency reports, and field checklists that are not related to the functionality of the frames and will not prevent follow-on construction activities from taking place.
5. Installation of temporary protection for construction.

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP4521005	PT – Hot Cell Area 01 – Set Wall Upper Frames	4PP4521020	PT- Hot Cell Area 01 – Set Lower Frame
4PP4521145	PT – Hot Cell Area 24 – Set Wall Upper Frames	4PP4521720	PT – Hot Cell 24 – Set Lower Frame
4PP4521155	PT – Hot Cell Area 25 – Set Wall Upper Frames	4PP4521770	PT – Hot Cell Area 25 – Set Lower Frame

Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Copy of installation inspection report with sign offs that show the frame is set in the final location, inclusive of permanent attachment to the base/wall support.

**Contract Fee Milestones**  
**PTF-05**

Facility	Activity ID	Description
PTF	1GPZZCFM05	Controls and Instrumentation Design Complete

**Milestone Definition**

Complete the Controls and Instrumentation (C&I) design. All deliverables mentioned are for the committed stage of design and include the supporting calculations and evaluations:

- System block diagrams (alpha revisions which do not incorporate vendor data or physicalization)
- Safety system requirement specifications to include APC (additional protection class) report and system safety design sketches
- Software functional specifications (to be incorporated into piping & instrumentation diagram schematic diagrams and logic diagrams)
- Material requisitions for quote
- Equipment specifications
- Datasheets
- Installation specifications
- Discipline design criteria documents
- Supporting calculations
- Design proposal drawings
- System descriptions to support committed system design

This scope does not include the layout and routing of C&I instrumentation cable, incorporation of vendor information, programming of software, or physicalization typically associated with confirmation activities.

Inclusions: Included in Definition

Exclusions: N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
3EP10EJCMP	PT - C&I Engineering Complete	3EP17HT003	PT - C&I SFS - CIV System Rev 0 (100%)
3EP17C1FNJ	PT- C&I – SBD FNJ	3EP17SR0FM	PT-C&I SSRS Rev 0 Completion
3EP17C1SUM	PT-C&I-EIT Report SUM		

Ref. original ID# 3EPZZEJGM

**Objective Evidence of Milestone Completion**

- At the time of completion, BNI will transmit a list of the drawing numbers to the DOE Federal Project Manager for the drawing type codes listed:
  - J1 - system block diagram
  - 3PS - safety system requirements specification
  - M6 - piping and instrument diagrams (control data from software functional specifications will be incorporated into piping and instrumentation diagrams)



**Contract Fee Milestones**  
**PTF-06**

Facility	Activity ID	Description
PTF	1GP47CFM06	Receipt of all Plant Service Air System Pipe Racks

**Milestone Definition**

Receive and accept all PSA system pipe racks at the Marshalling Yard, to include the following:

PSA-RK-00018	PSA-RK-00028	PSA-RK-00014	PSA-RK-00003	PSA-RK-00037
PSA-RK-00020	PSA-RK-00033	PSA-RK-00016	PSA-RK-00005	PSA-RK-00039
PSA-RK-00021	PSA-RK-00035	PSA-RK-00023	PSA-RK-00006	PSA-RK-00052
PSA-RK-00022	PSA-RK-00036	PSA-RK-00024	PSA-RK-00008	PSA-RK-00053
PSA-RK-00031	PSA-RK-00047	PSA-RK-00027	PSA-RK-00009	PSA-RK-00054
PSA-RK-00032	PSA-RK-00048	PSA-RK-00038	PSA-RK-00010	PSA-RK-00055
PSA-RK-00025	PSA-RK-00049	PSA-RK-00001	PSA-RK-00011	PSA-RK-00056
PSA-RK-00026	PSA-RK-00050	PSA-RK-00002	PSA-RK-00012	

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9ZP47257B1	PT QC/MRR – Release 1 – 56+ Racks – Rooms 311/322 Q-MA-PH02-08	9ZP47257E1	PT-MY QC&MRR-Release 4 – 77+ Racks-Rooms 415/423/423A Q-MA-PH02-03
9ZP47257C1	PT-MY QC&MRR-Release 6 – 77+ Rooms 431 A/B 422A/402 Q-MA-PH02-06	9ZP47257G1	PT-MY QC&MRR-Release 3 – 77+ Racks – Rooms 426/410/425 Q-MA-PH02-12
9ZP47257D1	PT-MY QC&MRR-Release 5 – 77+ Racks-Rooms 423A/B Q-MA-PH02-04	9ZP47257H1	PT-MY QC&MRR-Release 2 – 77+ Racks-Room 410 Q-MA-PH02-11

Ref. original ID# 9FP472093X

**Objective Evidence of Milestone Completion**

- Completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control.

**Contract Fee Milestones**  
**PTF-07**

Facility	Activity ID	Description
PTF	1GPZZCFM07	Electrical Design Complete

**Milestone Definition**

Complete the Pretreatment electrical design. All deliverables mentioned are for the committed stage of design and include the supporting calculations and evaluations:

- Single line diagrams
- Cable tray and raceway drawings
- Cable and wire routing
- Schematics
- Lighting drawings
- Grounding drawings
- Cathodic protection design
- Lightning protection drawings
- Communications layout drawings
- Material requisitions for quote
- Equipment specifications
- Datasheets
- Installation specifications
- Discipline design criteria documents
- Supporting calculations
- Design proposal drawings
- System descriptions to support committed system design

This scope does not include the layout and routing of C&I instrumentation cable, or incorporation of vendor information, or field requested changes typically associated with confirmation activities.

Inclusions

Included in Definition

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
3EP16SRCKE	PTF-Sum- EE Setroute Cable Routing-Electrical CLOSE	3EP16CMLA	PTF-EE Communication Layouts Annex
3EP16EEDFZ	PT - EE - Single Lines Design Freeze	3EP16112A3	PTF – EE Single Line Diagrams
3EP16CRDSN	PT –De sign Substantially Complete	3EP16MVE01	PTF – EE 13.8kV SWGR Relay Set points IFC

**Contract Fee Milestones**  
**PTF-07**

3EP16LDM01	PT-EE 120V Load List	3EP16PD004	PT-EE Unscheduled Physical Design –FY 12
3EP16PD005	PT-EE Cable Tray Layout	3EP16T3501	PT-EE-PT-Electrical Equipment List
3EP16PR500	PT-EE-PR-Electrical Equipment List	3EP16C4STA	PT-EE-Setroute Terms (BNG/DIW/FEP/HPS/LVE/MVE/PCW/PSW/SCW)
3EP16C1CBA	PT-EE-CBD (BNG/DIW/FEP/HPS/LVE/MVE/PCW/PSW/SCW)	3EP16C4STB	PT-EE-Setroute Terms (LPS/DCE/UPE/BSA/C2V/C3V/C5V/ISA/SPA)
3EP16C1CBB	PT-EE-CBD (BSA/C2V/C3V/C5V/DCE/ISA/LPS/PSA/UPE)	3EP16C4STD	PT-EE-Setroute Terms (DOW/FRP/PFH/PIH/PJV/RWH/TLP/UFP)
3EP16C1CBC	PT-EE-CBD (AFR/ASX/CHW/FDE/NAR/PVP/PVV/RDP/RLD/SHR/SPR/TCP)	3EP16C4STE	PT-EE-Setroute Terms (C1V/CNP/CRP/CXP/DWJ/EMJ/FNJ/HLP/MHJ/PTJ/PWD/PCJ/PPJ/RPJ/SDJ)
3EP16C1CBD	PT-EE-CBD (DOW/FRP/PFH/PIH/PJV/RWH/TLP/UFP)	3EP16C1CBE	PT-EE-CBD (C1V/CNP/CRP/CXP/DWJ/EMJ/FNJ/HLP/MHJ/PTJ/PWD/PCJ/PPJ/SDJ/RPJ)

Ref. original ID# 3EPZZEPPGM

**Objective Evidence of Milestone Completion**

- At the time of completion, BNI will transmit a list of the drawing numbers to the DOE Federal Project Manager for the drawing type codes listed:
  - E0 - Multipurpose - general drawings
  - E1 - One lines / single lines
  - E2 - Underground / embedded conduit plans / plot plans / layouts
  - E2-E53T –Above ground raceway and exposed conduit layout
  - E4 - Electrical layouts / hazard topography
  - E4 - Electrical layouts
  - E5 - Control / logic
  - E6 - Schematics / elem / block diagrams / riser diagrams
  - E7 - Connection / wiring diagrams
  - E8 - Electrical load list / panel schedules
  - E9 - Details / sections
  - EC - 480V motor control center schedules
  - Setroute report identifying released cables and raceway

**Contract Fee Milestones**  
**PTF-08**

Facility	Activity ID	Description
PTF	1GP30CFM08	Set Remaining Pretreatment Vessels at Elevation 0 Ft

**Milestone Definition**

Set the remaining in-cell vessels (listed below) in place in their final location.

UFP-VSL-0001A	UFP-VSL-0002A	HLP-VSL-00022	HLP-VSL-0027B	PWD-VSL-00044
UFP-VSL-0001B	UFP-VSL-0002B	HLP-VSL-00028	HLP-VSL-0027A	PVP-SCB-0002
PVP-VSL-00001				

Inclusions

Installation and inspection acceptance of the vessels listed above, verifying the vessels are in the correct final location and orientation; vessels will be in their final operational condition and will not require repair, modification, or upgrades.

Exclusions

1. Pipe work connections to the vessels
2. Final welding into position
3. Installation of the man access cover
4. Removal of any temporary construction aids where it can be demonstrated that these are required for follow-on construction activities
5. Removal of any shipping aids where it can be demonstrated that a logical case exists for removal at a later date and that these do not impede installation or construction activities
6. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that are not related to the functionality of the vessels, do not impact the follow-on activities, and are documented with justification to be excluded from the milestone
7. Internal cleanliness inspection acceptance
8. Outstanding vendor documentation that does not prevent the vessels from being used for installation or follow-on construction activities
9. Installation of temporary protection for the construction phase
10. Labeling

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP30201A9	PT-PA02E Set Vessel UFP-VSL-00001A	4PP30012AC	PT - PA04W Set Vessel HLP-VSL-22
4PP30031B	PT-PA03 Set Vessel UFP-VSL-1B & Weldout	4PP30012AB	PT - PA04E Set Vessels HLP-VSL-27B
4PP30032A	PT-PA03 Set Vessel UFP-VSL-2A & Weldout	4PP30012AA	PT - PA04E Set Vessels HLP-VSL-27A
4PP30032B	PT-PA03 Set Vessel UFP-VSL-2B & Weldout	4PP3004001	PT-PA04W Set & Weldout Vessel PVP-VSL-00001
4PP300344	PT-PA03 Set Vessel PWD-VSL-	4PP3004002	PT-PA04W Set Vessel HLP-VSL-

**Contract Fee Milestones**  
**PTF-07**

4PP300302	44 & Weldout PT-PA03 Set Vessel PVP-SCB-2 & Weldout	28
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Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Copy of the installation inspection report with sign offs for vessel setting activities that demonstrates the vessel is in its final location

***NOTE: Correct header Contract Fee Milestone for this page is PTF-08***

**Contract Fee Milestones**  
**PTF-09**

Facility	Activity ID	Description
PTF	1GP31CFM09	Set Pretreatment Vessels FEP-SEP-00001A and -00001B in PA02

**Milestone Definition**

Set Pretreatment vessels FEP-SEP-00001A and -00001B in place in their final location in PA02.

Inclusions

1. Installation and inspection acceptance that the vessels listed above are located in their correct final location and orientation including final fixing into position. Vessels will be in their final operational condition and will not require repair, modification, or upgrades
2. Installation and inspection acceptance of the support tower structure and square base frame support

Exclusions

1. Pipe work connections to the vessels
2. Installation of the man access cover
3. Removal of any temporary construction aids where it can be demonstrated that these are required for follow-on construction activities
4. Removal of any shipping aids where it can be demonstrated that a logical case exists for removal at a later date and that these do not impede installation or construction activities
5. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that are not related to the functionality of the vessels, do not impact the follow-on activities, and are documented with justification to be excluded from the milestone
6. Internal cleanliness inspection acceptance
7. Outstanding vendor documentation that does not prevent the vessels from being used for installation or follow-on construction activities
8. Installation of temporary protection for the construction phase
9. Labeling

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP30013A1	PT - PA02 Set FEP-SEP-00001B	4PP30013AC	PT - PA02 Set FEP-SEP-00001A

Ref. original ID# 4PP31013AE

**Objective Evidence of Milestone Completion**

- Copy of the installation inspection report with sign offs for vessel setting activities that demonstrates the vessel is located and fixed in its final location

**Contract Fee Milestones  
 PTF-10**

Facility	Activity ID	Description
PTF	1GP12CFM10	Complete Pretreatment Concrete Slabs at Elevation 56 Ft

**Milestone Definition**

Complete the placement of the remaining elevation 56 ft concrete slabs as follows:

FREP EL Slab - 5607	FREP EL Slab - 5618	FREP EL Slab - 5631	FREP EL Slab - 5641
FREP EL Slab - 5608	FREP EL Slab - 5619	FREP EL Slab - 5632	FREP EL Slab - 5644
FREP EL Slab - 5609	FREP EL Slab - 5620	FREP EL Slab - 5634	FREP EL Slab - 5645
FREP EL Slab - 5610	FREP EL Slab - 5625	FREP EL Slab - 5635	FREP EL Slab - 5646
FREP EL Slab - 5611	FREP EL Slab - 5626	FREP EL Slab - 5636	FREP EL Slab - 5647
FREP EL Slab - 5612	FREP EL Slab - 5627	FREP EL Slab - 5637	FREP EL Slab - 5648
FREP EL Slab - 5614	FREP EL Slab - 5628	FREP EL Slab - 5638	FREP EL Slab - 5649
FREP EL Slab - 5615	FREP EL Slab - 5629	FREP EL Slab - 5639	FREP EL Slab - 5650
FREP EL Slab - 5616	FREP EL Slab - 5630	FREP EL Slab - 5640	

Note - The following slabs have been completed: 5601, 5602, 5603, 5604, 5605, 5606, 5613, 5621, 5622, 5623, 5624, 5633, 5642, and 5643.

Reference field sketches 24590-PTF-FSK-CON-L-04-005 and 24590-PTF-FSK-CON-L-04-006.

Inclusions

Placement and acceptance of concrete and all associated embeds and penetrations

Exclusions

1. Formwork and/or shoring removal
2. Pour backs for construction access
3. Cosmetic surface repairs
4. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that do not impact the structural integrity of the concrete
5. Coatings

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP125633G	PT - FREP EL Slab - 5648 - South	4PP1256B13	PT - PA13E Cell Top FREP - 5616
4PP125633H	PT - FREP EL Slab - 5649 - South	4PP1256B14	PT - PA13W Cell Top FREP - 5615
4PP125634A	PT - FREP EL Slab - 5630 - MH Area (incl Shoring at +52)	4PP1256C02	PT - PA02E Cell Top FREP PA02 - 5635 East
4PP1256B05	PT - PA04-W Cell Top FREP [EL 56] (WP to Include Decking) WP PCC5637	4PP1256C09	PT - Cell Top FREP PA09 - 5614 (WP to Include Installation of Decking)

**Contract Fee Milestones**  
**PTF-10**

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Ref. original ID# 4PP1200M09

**Objective Evidence of Milestone Completion**

- Copies of concrete pour cards with sign off for placement acceptance
- Sketch showing scope of construction access at elevation 56 ft, marked up to indicate areas excluded for construction access
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed pour cards



Contract Fee Milestones  
 PTF-11

Facility	Activity ID	Description
PTF	1GP12CFM11	Complete Concrete Walls between Elevations 77 Ft 0 In. and 98 Ft 0 In. (5th Lift Walls)

**Milestone Definition**

Complete the Pretreatment concrete 5th lift wall placements between elevations 77 ft and 98 ft as detailed below:

FREP Wall 5-20	FREP Wall 5-57	FREP Wall 5-81A	FREP Wall 5-51	FREP Wall 5-31
FREP Wall 5-25	FREP Wall 5-62	FREP Wall 5-56	FREP Wall 5-43	FREP Wall 5-53
FREP Wall 5-35	FREP Wall 5-41	FREP Wall 5-39	FREP Wall 5-33	FREP Wall 5-44
FREP Wall 5-26	FREP Wall 5-59	FREP Wall 5-34	FREP Wall 5-91	FREP Wall 5-55
FREP Wall 5-63	FREP Wall 5-64	FREP Wall 5-81B	FREP Wall 5-22	FREP Wall 5-32
FREP Wall 5-94	FREP Wall 5-36	FREP Wall 5-38	FREP Wall 5-40	FREP Wall 5-37
FREP Wall 5-66	FREP Wall 5-27	FREP Wall 5-58	FREP Wall 5-30	
FREP Wall 5-69	FREP Wall 5-45	FREP Wall 5-77	FREP Wall 5-52	

Reference field sketches 24590-PTF-FSK-CON-L 04-011 and 24590-PTF-FSK-CON-L 04-012.

Inclusions

Placement and acceptance of concrete and all associated embeds and penetrations

Exclusions

1. Formwork and/or shoring removal
2. Pour backs for construction access
3. Cosmetic surface repairs
4. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that do not impact the structural integrity of the concrete
5. Coatings

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP12W563F	PT - FREP Wall 5-63 - EL 77-98	4PP12W552F	PT - FREP Wall 5-52 - EL 77-98
4PP12W569F	PT - FREP Wall 5-69 - EL 77-98	4PP12W553F	PT - FREP Wall 5-53 - EL 77-98
4PP12W566F	PT - FREP Wall 5-66 - EL 77-98	4PP12W522F	PT - FREP Wall 5-22 - EL 77-98
4PP12W557F	PT - FREP Wall 5-57 - EL 77-98	4PP12W530F	PT - FREP Wall 5-30 - EL 77-98
4PP12W559F	PT - FREP Wall 5-59 - EL 77-98	4PP12W544F	PT - FREP Wall 5-44 - EL 77-98

4PP12W562F	PT - FREP Wall 5-62 - EL 77-98	4PP12W532F	PT - FREP Wall 5-32 - EL 77-98
4PP12W520F	PT - FREP Wall 5-20 - EL 77-98	4PP12W555F	PT - FREP Wall 5-55 - EL 77-98
4PP12W564F	PT - FREP Wall 5-64 - EL 77-98	4PP12W537F	PT - FREP Wall 5-37 - EL 77-98
4PP12W58AF	PT - FREP Wall 5-81A - EL 73.5-86.75	4PP12W539F	PT - FREP Wall 5-39 - EL 77-98
4PP12W525F	PT - FREP Wall 5-25 - EL 77-98	4PP12W538F	PT - FREP Wall 5-38 - EL 77-98
4PP12W533F	PT - FREP Wall 5-33 - EL 77-98	4PP12W531F	PT - FREP Wall 5-31 - EL 77-98
4PP12W556F	PT - FREP Wall 5-56 - EL 77-98	4PP12W540F	PT - FREP Wall 5-40 - EL 77-98
4PP12W58BF	PT - FREP Wall 5-81B Header Wall - El 91-75 - 98 Includes Shoring	4PP12W594F	PT - FREP Wall 5-94 - EL 77-98
4PP12W526F	PT - FREP Wall 5-26 - EL 77-98	4PP12W577F	PT - FREP Wall 5-77 - EL 77-98
4PP12W527F	PT - FREP Wall 5-27 - EL 77-98	4PP12W545F	PT - FREP Wall 5-45 - EL 77-98
4PP12W534F	PT - FREP Wall 5-34 - EL 77-98	4PP12W536F	PT - FREP Wall 5-36 - EL 77-98
4PP12W558F	PT - FREP Wall 5-58 - EL 77-98	4PP12W541F	PT - FREP Wall 5-41 - EL 77-98
4PP12W551F	PT - FREP Wall 5-51 - EL 77-98	4PP12W591F	PT - FREP Wall 5-91 - EL 77-98
4PP12W543F	PT - FREP Wall 5-43 - EL 77-98	4PP12W535F	PT - FREP Wall 5-35 - EL 77-98

Ref. original ID# 4PP12W59GM

**Objective Evidence of Milestone Completion**

- Copies of concrete pour cards with sign off for placement acceptance
- Sketch showing scope of walls at elevation 77 ft, marked up to indicate areas excluded for construction access
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed pour cards

**Contract Fee Milestones**  
**PTF-12**

Facility	Activity ID	Description
PTF	1GP14CFM12	Install Roofing at Elevation 98 Ft

**Milestone Definition**

Complete the installation of roofing on the PT Facility main building at the elevation 98 ft.

Inclusions

Erection and final fixing into position to the building structure of roof panels and associated supports in their final location and design condition to provide weather protection

Exclusions

1. Roof panels left out to provide construction access where it can be demonstrated that these are necessary for follow-on construction activities to provide access\*
2. Open punch list items and open nonconformance reports, construction deficiency reports, and field checklists that do not interfere with immediate weather protection
3. Coatings and coatings touch up
4. Permanent penetration seals
5. Removal of temporary construction aids where it can be demonstrated these are required for follow-on activities
6. Grounding attachments
7. Attachment of lighting fixtures and other equipment items

\*Roof panels that are excluded to provide construction access will be identified on drawing or sketch, marked up to indicate exclusions.

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP1450098	PT – S/C Install Roofing at Elev +98		

Ref. original ID# 4PP1452000

**Objective Evidence of Milestone Completion**

- Approved engineering drawing and specification for roof system and sketch or drawing showing scope of the roof completed marked up to indicate areas excluded for Construction access
- Indication to demonstrate that the milestone scope completed is covered by the signed subcontractor inspection records
- Copy of signed subcontractor installation records for roof installation acceptance; these will be endorsed by BNI confirming milestone completion

**Contract Fee Milestones**  
**PTF-13**

Facility	Activity ID	Description
PTF	1GP27CFM13	Set Air Handling Units at Elevation 98 Ft 0 In.

**Milestone Definition**

Set into place in the final location the C2 air handling units located at elevation 98 ft in room P-0520, column lines 25 through 30, and column lines B through H.

Air handling unit (AHU) tag reference numbers:

24590-PTF-MA-C2V-AHU-00001A	24590-PTF-MA-C2V-AHU-00001B
24590-PTF-MA-C2V-AHU-00001C	24590-PTF-MA-C2V-AHU-00001D

Inclusions

Setting the AHUs in their final location and final fixing into position

Exclusions

1. Final alignments, AHU internals for motor/fan couplings, and final adjustments to support startup activities
2. Electrical and grounding connections
3. Piping and instrument connections
4. Duct connections
5. Painting and painting touch up
6. Fireproofing and fireproofing touch up
7. Labeling and tags
8. Outstanding vendor documentation that does not impact the installation activities, such as spare parts list and operations and maintenance manuals
9. Removal of temporary construction aids and shipping where it can be demonstrated that these are required for follow-on activities
10. Installation of temporary protection for construction
11. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that are not related to the functionality of the AHUs (i.e., will not prevent connection of duct and hook-up of controls and utilities) or do not impact the installation activities
12. Internal cleanliness inspection and acceptance

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP1577820	PT – S/C Fire Protection EI 98 Lower Layer		

Ref. original ID# 4PP2756H10

**Objective Evidence of Milestone Completion**

- Copy of installation inspection report with sign offs that show the AHUs are set in their final location

**Contract Fee Milestones**  
**PTF-14**

Facility	Activity ID	Description
PTF	1GP30CFM14	Set Filter Cave High-Efficiency Mist Eliminator, HEPA, and Demister Equipment

**Milestone Definition**

Initial set into final location the HEPA and high-efficiency mist eliminator filter housings and demister vessels identified below, located at elevation 56 ft, in the filter cave room number P-0335, column lines 17 through 28 and column lines H through L (reference PA31).

C5V-HEPA-00003A	C5V-HEPA-00003F	PJV-HEPA-00001A	PJV-HEPA-00001F	PJV-DMST-00002B
C5V-HEPA-00003B	C5V-HEPA-00003G	PJV-HEPA-00001B	PJV-HEPA-00001G	PJV-DMST-00002C
C5V-HEPA-00003C	C5V-HEPA-00003H	PJV-HEPA-00001C	PVV-HEPA-00001A	PVP-HEME-00001A
C5V-HEPA-00003D	C5V-HEPA-00003I	PJV-HEPA-00001D	PVV-HEPA-00001B	PVP-HEME-00001B
C5V-HEPA-00003E	C5V-HEPA-00003J	PJV-HEPA-00001E	PJV-DMST-00002A	PVP-HEME-00001C

Inclusions

Installation and inspection acceptance of the filter housing, vessels, and associated support structure of the equipment listed above, verifying correct location and orientation

Exclusions

1. Installation of equipment components that are agreed to be unsuitable for installation in a construction environment and would be subject to potential damage (e.g., filters and instruments)
2. Electrical/grounding connections
3. Piping and instrument connections
4. Duct work connections
5. Labeling and tags
6. Removal of temporary construction aids and shipping aids where it can be demonstrated that these are required for follow-on activities or a more appropriate time to remove the item exists
7. Installation of temporary protection for construction
8. Open punch list items and open nonconformance reports, construction deficiency reports, and field checklists that are not related to the functionality of the filter housing structure and will not prevent the follow-on construction activities from taking place
9. Internal cleanliness inspection and acceptance
10. Installation of temporary protection for construction

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP30E18	PT - PA31 OTT Heavy Rigging CL 17-24	9FP362150R	PT - DMY - PJV-DMST-2A/2B/2C PJV Demisters
9FP2700140	PT - DMY- Rem C/O HEPA Filter Hsings (MKH0-02) +56	9FP361850R	PT - DMY - PVP-HEME- 1A/1B/1C High Mst Elimntr
4PP3631001	PT - Install PVP/PVV HEME Vessels	4PP361560	PT - Install PJV Demisters -PJV DMST-00002A/2B/2C

**Contract Fee Milestones**  
**PTF-14**

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Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Copy of installation inspection report with sign offs that show the HEPA and high-efficiency mist eliminator filter housing/demister vessels are set in their final locations, inclusive of permanent attachment to the base support
-

**Contract Fee Milestones**  
**PTF-15**

Facility	Activity ID	Description
PTF	1GP28CFM15	Receipt of Electrical Equipment for the Control Building Electrical Rooms

**Milestone Definition**

Receive and accept the electrical equipment for the control building electrical rooms at the Marshalling Yard, which includes the following:

LVE-MCC-10033A	Motor Control Center	UPE-BATT-10003	UPS Battery
LVE-MCC-10033B	Motor Control Center	UPE-BATT-10007	UPS Battery
LVE-MCC-10201A	Motor Control Center	UPE-BATT-10018	UPS Battery
LVE-MCC-10201B	Motor Control Center	UPE-UPS-10002A	Uninterruptible Power Supply
UPE-BATT-10001A	UPS Battery	UPE-UPS-10002B	Uninterruptible Power Supply
UPE-BATT-10001B	UPS Battery	UPE-UPS-10003	Uninterruptible Power Supply
UPE-BATT-10002A	UPS Battery	UPE-UPS-10007	Uninterruptible Power Supply
UPE-BATT-10002B	UPS Battery	UPE-UPS-10018	Uninterruptible Power Supply

Reference rooms PA140, PA146, and PA147 on general arrangement drawing 24590-PTF-P1-P01T-00020.

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9ZP28EU11M	PT-MY QC & MRR Release 6 – UPS Non-ITS	9ZP28EU13M	PT-MY QC & MRR Release 2 – UPS ITS
9ZP28EC4M	PT-MY QC & MRR Rel 6-480V MCC Non-ITS +0	9ZP28EU14M	PT-MY QC & MRR Release 3 (Batteries) – UPS ITS
9ZP28EC11M	PT-MY QC & MRR Release 3 – 480V MCC Non-ITS	9ZP2835401	PT-QC/MRR OPT5 BATT MR

Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control.

**Contract Fee Milestones**  
**PTF-16**

Facility	Activity ID	Description
PTF	1GP15CFM16	Complete Bulk In-cell Pipe Installation

**Milestone Definition**

Complete bulk pipe work installation in PA01, PA02, PA03, PA04, PA07, PA08, PA09, PA10, PA11, and PA13.

Inclusions

Erection and inspection acceptance of pipe work and stock coded pipe hangers. Pipe installation includes stick build installation and pipe work installed as part of a module installation concept as appropriate

Exclusions

1. Pipe and hangers left out to provide construction access for follow-on construction activities
2. Pressure testing, leak testing, flushing, blowing, drying, layup preservation of piping
3. In-line components left out for startup activities
4. Closure spools/welds to nozzles/equipment
5. Open punch list items and open nonconformance reports, construction deficiency reports, and field checklists that do not prevent the piping from being tested
6. Coatings and coatings touch up
7. Removal of temporary construction aids and/or temporary hangers where it can be demonstrated that this needed for follow-on activities
8. Labeling and tags
9. Insulation
10. Final adjustment of pipe hanger components (spring can adjustments, for example, subsequent to pressure testing)
11. Completion of multi-commodity hangers insofar as the uncompleted items are not for pipe if applicable
12. Instrument connections, instrument tubing

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP155S01C	PT - PA01[A] Stick-Build Pipe (Post Mod)	4PP155S07C	PT - PA07 Stick-Build Pipe (Post Mods)
4PP155S02B	PT-PA02 Upper Piping UFP-VSL-00062A/B	4PP155S08C	PT - PA08 Stick-Build Pipe (Post Mods)
4PP155S03B	PT - PA03 Stick-Build Pipe (After CT)	4PP155S09B	PT - PA09 Install Stick-Build Pipe (Post Mod)
4PP155S04C	PT - PA04E Stick-Build Pipe (Post Mod)	4PP155S10A	PT - PA10 Install Stick-Build Pipe
4PP155S04D	PT - PA04W Stick-Build Pipe (Post Mod)	4PP155S11C	PT - PA11 Install Stick-Build Pipe (Post Mod)
4PP155S13A	PT - PA13E Install Stick-Build Pipe - Early	4PP155S13B	PT - PA13W Install Stick-Build Pipe - Early

**Contract Fee Milestones**



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Ref. original ID# 4PP1500M06

**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of piping and hangers in planning area, marked up to indicate piping and/or hangers excluded for follow-on construction activities
- Indication to demonstrate the milestone scope is covered by signed inspection records
- Document numbers for signed off installation records for piping and hanger installation corresponding to the milestone scope. These consist of the following types of records (or the equivalent in use at time of milestone completion): above ground piping inspection record, pipe support installation record
- Welding, nondestructive examination, and bolt torquing records are not included in the objective evidence because completion and acceptance of these is required prior to signing the piping and hanger installation records

**Contract Fee Milestones**  
**PTF-17**

Facility	Activity ID	Description
PTF	1GP11CFM17	Complete Pretreatment Design

**Milestone Definition**

Complete the definitive stage of project design for all engineering disciplines. The conceptual design will have been completed and the detail design activities have been completed, which are necessary to support a bid for construction and procurement activities, and issued for construction or issued for quote drawings, specifications, and datasheets, suitable for soliciting bids from contractors and suppliers.

The following is a list of the deliverables that are included:

Design deliverables in the PT Facility engineering design complete include those that are specific to initiating the Pretreatment procurement and construction activities:

- All disciplines:
  - Material requisitions for quote for PT Facility related equipment specifications
  - Datasheets
  - Discipline design criteria documents
  - Supporting calculations
  - Design proposal drawings
  - System descriptions to support committed system design
  
- Mechanical and Process:
  - Piping and instrumentation diagrams and associated lists
  - Process flow diagrams
  - Ventilation and instrumentation diagrams and associated lists
  - Sampling and analysis requirement documents
  
- Plant Design:
  - 3D model
  - General arrangement drawings
  - Isometrics
  - Pipe stress and support interim calculations
  - Equipment location diagrams
  
- Civil/Structural/Architectural:
  - Architectural plans, elevations, and sections
  - Concrete drawings
  - Structural steel drawings
  - Rebar drawings
  
- Electrical:
  - Single line diagrams
  - Cable tray and raceway drawings
  - Schematics
  - Lighting drawings

**Contract Fee Milestones  
 PTF-17**

- Grounding drawings
- Lightning protection drawings
- Communications layout drawings
- Cable and wire routing
  
- Controls and Instrumentation:
  - Instrument location drawings
  - System block diagrams
  - Physical controls and instrumentation design documents
  
- Mechanical Handling:
  - Mechanical handling diagrams
  - Mechanical sequence diagrams

Design deliverables are for the committed stage of design and include the work for the supporting calculations and evaluations. The confirmed stage of design that incorporates vendor information/changes/impacts is not included in this milestone; they are part of the engineering support activities, which will continue through start-up.

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
3EP10EJCOMP	PT - C&I Engineering Complete	3EP10ENDSN	PT - MS Design Complete
3EP10ECDSN	PT - CSA - Civil/Structural Design Complete	3EP10EPDCN	PT - PD Design Complete Milestone
		3EP10EPCMP	PT - PD Plant Design Engineering Complete Milestone
		3EP10EECOMP	PT - Electrical Engineering Complete Milestone

Ref. original ID# 3EPZZ0099F

**Objective Evidence of Milestone Completion**

At the time of completion, BNI will transmit a list of the document numbers to the DOE Federal Project Manager for the listed document types. Completion will be indicated by the completion of the work packages in engineering progress and performance reports that support the physical design complete, and will be verified by the documents being available in Project Document Control. BNI will provide Control Account Manager's email notification of milestone completion to the Area Project Manager, Functional Manager, and DOE Federal Project Manager; documents are available for review in Project Document Control. Document type codes for the documents below are described in 24590-WTP-DNT-PADC-02-001, Rev 10, Table 6-5.

**Contract Fee Milestones  
PTF-17**

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- All disciplines:
  - Material requisitions for quote for PT Facility related equipment specifications
  - Datasheets
  - Discipline design criteria documents
  - Supporting calculations
  - Design proposal drawings
  - System descriptions to support committed system design
  
- Mechanical and Process:
  - M6 - Piping and instrumentation diagrams and associated lists
  - M5 - Process flow diagrams
  - M8 - Ventilation and instrumentation diagrams and associated lists
  - Sampling and analysis requirement documents
  
- Plant Design:
  - P1 - General arrangement drawings
  - P3 - Isometrics
  - P6C - Pipe stress and support interim calculations
  - P1 - Equipment location diagrams
  
- Civil/Structural/Architectural:
  - A1, A2, and A3 - Architectural plans, elevations, and sections
  - DB - Concrete drawings
  - SS - Structural steel drawings
  - DG - Rebar drawings
  
- Electrical:
  - E0 - Multipurpose - general drawings
  - E1 - One lines / single lines
  - E2 - Underground / embedded conduit plans / plot plans / layouts
  - E2-E53T - Aboveground raceway and exposed conduit layout
  - E4 - Electrical layouts / hazard topography
  - E4 - Electrical layouts
  - E5 - Control / logic
  - E6 - Schematics / elem / block diagrams / riser diagrams
  - E7 - Connection / wiring diagrams
  - E8 - Electrical load list / panel schedules
  - E9 - Details / sections
  - EC - 480V motor control center schedules
  - Set route report identifying released cables and raceway
  
- Controls and Instrumentation:
  - J2 - Instrument location drawings
  - J1 - System block diagrams
  - J9D - Physical controls and instrumentation design documents (cabinet/rack general arrangement data sheets)

**Contract Fee Milestones**  
**PTF-17**

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- Mechanical Handling:
  - M7 - Mechanical handling diagrams
  - M1 - Mechanical sequence diagrams

**Exceptions**

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- Plant Design:
  - 3D model will not be available as a document in Project Document Control; it exists as electronic media

**Contract Fee Milestones**  
**PTF-18**

Facility	Activity ID	Description
PTF	1GP30CFM18	Set Hot Cell Major Equipment

**Milestone Definition**

Set into final location the hot cell major equipment items identified below on their permanent support structure located at elevation 0 ft, in room P-0123 column lines 4 through 24 and column lines E through H (reference PA21).

CNP-HX-00001	FEP-PMP-00007B	HLP-PMP-00017B	UFP-FILT-00002A	UFP-PMP-00042A
CXP-HX-00001A	FEP-PMP-00008A	HLP-PMP-00019B	UFP-FILT-00002B	UFP-PMP-00042B
CXP-HX-00001B	FEP-PMP-00008B	HLP-PMP-00021	UFP-FILT-00003A	UFP-PP-00001A
CXP-IXC-00001	FEP-PMP-00009A	HLP-PMP-00019A	UFP-FILT-00003B	UFP-PP-00001B
CXP-IXC-00002	FEP-PMP-00009B	RDP-PMP-00008A	UFP-FILT-00004A	UFP-PP-00002A
CXP-IXC-00003	FRP-PMP-00001	RDP-PMP-00008B	UFP-FILT-00004B	UFP-PP-00002B
CXP-IXC-00004	FRP-PMP-00002A	TLP-PMP-00001	UFP-FILT-00005A	UFP-PP-00003A
CXP-PMP-00001A	FRP-RBLR-00001A	TLP-RBLR-00001	UFP-FILT-00005B	UFP-PP-00003B
CXP-PMP-00001B	FRP-RBLR-00001B	UFP-FILT-00001A	UFP-PMP-00041A	
FEP-PMP-00007A	HLP-PMP-00017A	UFP-FILT-00001B	UFP-PMP-00041B	

Inclusions

Installation and inspection acceptance of the as designed hot cell equipment listed above and associated support structure verifying correct location and orientation

Exclusions

1. Installation of items agreed as unsuitable to be installed in a construction environment and which would be subject to potential damage
2. Jumper/pipe work connections to the vessels
3. Installation of the man access cover to vessels
4. Removal of any temporary construction aids where it can be demonstrated that this is needed for follow-on activities
5. Open punch list items and open nonconformance reports, construction deficiency reports, and field checklists that do not relate to the functionality of the equipment/vessels and will not prevent follow-on construction activities from taking place
6. Internal cleanliness inspection and acceptance
7. Installation of temporary protection for construction

**Contract Fee Milestones  
 PTF-18**

**Key Predecessors**

<b>Activity ID</b>	<b>Description</b>	<b>Activity ID</b>	<b>Description</b>
4PP2021020	PT – Hot Cell Area 02 – Set Equipment	4PP2021190	PT – Hot Cell Area 28 – Set Equipment
4PP2021030	PT – Hot Cell Area 03 – Set Equipment	4PP2021220	PT – Hot Cell Area 31 – Set Equipment
4PP2021050	PT – Hot Cell Area 05 – Set Equipment	4PP2021230	PT – Hot Cell Area 32 – Set Equipment
4PP2021060	PT – Hot Cell Area 06 – Set Equipment	4PP2021120	PT – Hot Cell Area 17 – Set Equipment
4PP2021070	PT – Hot Cell Area 07 – Set Equipment	4PP2021270	PT – Hot Cell Area 36 – Set Equipment
4PP2021080	PT – Hot Cell Area 08 – Set Equipment	4PP2021280	PT – Hot Cell Area 37 – Set Equipment
4PP2021150	PT – Hot Cell Area 24 – Set Equipment	4PP2021290	PT – Hot Cell Area 38 – Set Equipment
4PP2021160	PT – Hot Cell Area 25 – Set Equipment	4PP2021300	PT – Hot Cell Area 39 – Set Equipment
4PP2021170	PT – Hot Cell Area 26 – Set Equipment	4PP2021250	PT – Hot Cell Area 34 – Set Equipment
4PP2021180	PT – Hot Cell Area 27 – Set Equipment	4PP2021260	PT – Hot Cell Area 35 – Set Equipment
4PP2021090	PT – Hot Cell Area 09 – Set Equipment		
4PP2021110	PT – Hot Cell Area 11 – Set Equipment		

Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Copy of installation inspection report with sign offs that show the major equipment is set in the final location inclusive of permanent attachment to the base support

**Contract Fee Milestones**  
**PTF-19**

Facility	Activity ID	Description
PTF	1GP14CFM19	Complete Main Building Weathering

**Milestone Definition**

Complete the installation of siding and roofing for the PT Facility main building.

Inclusions

Erection and final fixing into position to the building structure of the siding and roof panels and associated supports in their final location and design condition

Exclusions

1. Siding and roof panels left out to provide construction access where it can be demonstrated that these are necessary for follow-on construction activities to provide access\*
2. Open punch list items and nonconformance reports, construction deficiency reports, and field checklists that do not interfere with immediate weather protection
3. Coatings and coatings touch up
4. Permanent penetration seals
5. Removal of temporary construction aids where it can be demonstrated these are required for follow-on activities
6. Grounding attachments
7. Labeling and signs
8. Attachment of lighting fixtures and other equipment items
9. Permanent doors and windows where it can be demonstrated these have been excluded for construction impacts

\*Panels that are excluded to provide construction access will be identified on drawing or sketch marked up to indicate exclusions

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4PP1441000	PT - S/C Install Elevation Siding EL 98 to 119	4PP1451000	PT - S/C Install Roofing at EL +119 North

Ref. original ID# 4PP1400M07

**Objective Evidence of Milestone Completion**

- Approved engineering drawing and specification for roof system and sketch or drawing showing scope of main building siding and roof completed, marked up to indicate areas excluded for construction access
- Indication to demonstrate that the milestone scope completed is covered by the signed subcontractor inspection records
- Copies of signed subcontractor installation records for siding and roof installation acceptance; these will be endorsed by BNI confirming milestone completion



**Contract Fee Milestones**  
**PTF-20**

Facility	Activity ID	Description
PTF	1GPCOCFM20	Final System Turnover Complete

**Milestone Definition**

Complete the construction of the PT Facility as represented by turnover of the final system to Startup.

Inclusions

N/A

Exclusions

1. TCP system category B and E punch list items as defined by 24590-WTP-GPG-CON-1601, *Control of Punch List Items*
2. Testing activities that are Startup scope per CCN 065971, *Division of Responsibility - Construction Department and Commissioning & Training*
3. Removal of temporary construction aids (temporary power, etc.)
4. Turnover of all documentation
5. Startup final acceptance signatures of TCP system turnover
6. Systems not scheduled to complete prior to target construction completion date

**Key Predecessor Listing**

Activity ID	Description	Activity ID	Description
5HPC2DCEIA	PT SU Accept From Construction DCE	5HPC2STRIA	PT SU Accept From Construction STR
5HPC2MVEIA	PT SU Accept From Construction MVE	5HPC2DOWIA	PT SU Accept From Construction DOW
5HPC2LVEIA	PT SU Accept From Construction LVE	5HPC2HTEIA	PT SU Accept From Construction HTE
5HPC2C1VIA	PT SU Accept From Construction C1V	5HPC2HPSIA	PT SU Accept From Construction HPS
5HPC2ISAIA	PT SU Accept From Construction ISA	5HPC2CPEIA	PT SU Accept From Construction CPE
5HPC2NLDIA	PT SU Accept From Construction NLD	5HPC2GREIA	PT SU Accept From Construction GRE
5HPC2PCJIA	PT SU Accept From Construction PCJ	5HPC2FPWIA	PT SU Accept From Construction FPW
5HPC2PSWIA	PT SU Accept From Construction PSW	5HPC2LPSIA	PT SU Accept From Construction LPS
5HPC2UPEIA	PT SU Accept From Construction UPE	5HPC2C3VIA	PT SU Accept From Construction C3V
5HPC2CHWIA	PT SU Accept From Construction CHW	5HPC2CMEIA	PT SU Accept From Construction CME
5HPC2LTEIA	PT SU Accept From Construction LTE	5HPC2DWJIA	PT SU Accept From Construction DWJ
5HPC2PCWIA	PT SU Accept From Construction PCW	5HPC2FEPIA	PT SU Accept From Construction FEP
5HPC2PSAIA	PT SU Accept From Construction	5HPC2PTJIA	PT SU Accept From Construction

5HPC2RLDIA	PSA PT SU Accept From Construction RLD	5HPC2PVVIA	PTJ PT SU Accept From Construction PVV
5HPC2SCWIA	PT SU Accept From Construction SCW	5HPC2UFPIA	PT SU Accept From Construction UFP
5HPC2SNDIA	PT SU Accept From Construction SND	5HPC2SCEIA	PT SU Accept From Construction SCE
5HPC2AFRIA	PT SU Accept From Construction AFR	5HPC2PFHIA	PT SU Accept From Construction PFH
5HPC2C5VIA	PT SU Accept From Construction C5V	5HPC2C2VIA	PT SU Accept From Construction C2V
5HPC2DIWIA	PT SU Accept From Construction DIW	5HPC2MHJIA	PT SU Accept From Construction MHJ
5HPC2FDEIA	PT SU Accept From Construction FDE	5HPC2TLP	PT SU Accept From Construction TLP
5HPC2FRPIA	PT SU Accept From Construction FRP	5HPC2NARIA	PT SU Accept From Construction NAR
5HPC2HLP	PT SU Accept From Construction HLP	5HPC2BSAIA	PT SU Accept From Construction BSA
5HPC2PJVIA	PT SU Accept From Construction PJV	5HPC2ASJIA	PT SU Accept From Construction ASJ
5HPC2PVP	PT SU Accept From Construction PVP	5HPC2CRPIA	PT SU Accept From Construction CRP
5HPC2PWDIA	PT SU Accept From Construction PWD	5HPC2SDJIA	PT SU Accept From Construction SDJ
5HPC2SHRIA	PT SU Accept From Construction SHR	5HPC2TCP	PT SU Accept From Construction TCP
5HPC2SNRIA	PT SU Accept From Construction SNR	5HPC2SPRIA	PT SU Accept From Construction SPR

**Exception Systems**

Activity ID	Description	Activity ID	Description
5HPC2EMJIA	PT SU Accept From Construction EMJ	5HPC2PPJIA	PT SU Accept From Construction PPJ
5HPC2ASXIA	PT SU Accept From Construction ASX	5HPC2CNPIA	PT SU Accept From Construction CNP
5HPC2RPJIA	PT SU Accept From Construction RPJ	5HPC2RDPIA	PT SU Accept From Construction RDP
5HPC2CXP	PT SU Accept From Construction CXP	5HPC2RWHIA	PT SU Accept From Construction RWH
5HPC2PIHIA	PT SU Accept From Construction PIH		

Ref. original ID# 4PPCONPGM

**Objective Evidence of Milestone Completion**

- Copy of Construction Management signed turnover package for the final system
- Copies of open B and E punch list items for the final system

**Contract Fee Milestones**  
**PTF-21**

Facility	Activity ID	Description
PTF	1GPC2CFM21	Construction Turnover of PIH System Crane to Startup

**Milestone Definition**

Complete the turnover of the PIH system to Startup.

Inclusions

1. System turnover will include all system components required for completing the startup activities including all documentation required by startup to support startup activities.
2. The crane system includes such features as the crane bridge, trolley with power manipulator , control system, and cable reel system.

Exclusions

1. PIH system category open punch list items that do not prevent the PIH system from being turned over to start up and do not prevent completion of startup activities
2. Testing activities that are Startup scope per CCN 065971, *Division of Responsibility - Construction Department and Commissioning & Training*
3. Removal of temporary construction aids (temporary power, etc.)
4. Startup final acceptance signatures of TCP System turnover

**Key Predecessor Listing**

This milestone will be FF to S/U activity 5HPC2PIHIA - PT SU Accept From Construction PIH.

Activity ID	Description	Activity ID	Description
5HPC2PIHBA	PT SU Construction T/O to Startup PIH (includes Walkdowns & Punchlist Review)		

Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Copies of turnover certificates signed by construction indicating system is complete and ready to hand over to the receiving organization

**Contract Fee Milestones**  
**PTF-22**

Facility	Activity ID	Description
PTF	1GPC2CFM22	Demonstration of Resin Addition to Ion Exchange Columns

**Milestone Definition**

Demonstrate filling an ion exchange (IX) column in the PT Facility hot cell, using the IX Fresh Resin Addition system.

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
5HPC2CRPIA	PT SU Accept from Construction CRP	5HPC2CXPIA	PT SU Accept from Construction CXP
5HPC2CRPAA	PT SU Perform Component Testing CRP	5HPC2CXPAA	PT SU Perform Component Testing CXP
5HPC2CRPEA	PT SU Perform System Testing CRP		

Ref. original ID# 5HPC2CXPAA

**Objective Evidence of Milestone Completion**

- Completed copy of the test section(s) related to resin addition to an IX column. Resin transfer will be from CRP Fresh Resin Addition tank to hot cell IX column and meet design transfer rates

**Contract Fee Milestones**  
**PTF-23**

Facility	Activity ID	Description
PTF	1GPE2CFM23	Submit Final Safety Analysis Report

**Milestone Definition**

Submit Final Safety Analysis Report. This gatepost is the revision and submission of the 10CFR830 compliant 2016 Update of the PT Documented Safety Analysis for DOE-WTP review and approval.

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
7KPE21M444	PT - Prepare DSA Update 1		

Ref. original ID# N/A

**Objective Evidence of Milestone Completion**

- Transmittal of the 2016 Pretreatment Documented Safety Analysis Update for DOE approval via letter
- DOE-WTP to determine acceptability for review of the document within two weeks of receipt

**Contract Fee Milestones**  
**HLW-04**

Facility	Activity ID	Description
HLW	1GH36P1044	Receive and Accept Plant Wash Vessel RLD-VSL-8

**Milestone Definition**

Receive and accept plant wash vessel RLD-VSL-8 at the Material Handling Facility.

Inclusions

Included in Definition

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9ZH361244M	MRR Plant Wash Vessel RLD-VSL-08		

**Objective Evidence of Milestone Completion**

- Documented evidence to DOE of the receipt of equipment
- Completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control

**Contract Fee Milestones**  
**HLW-06**

Facility	Activity ID	Description
HLW	1GH47C1146	Set Offgas Carbon Adsorber

**Milestone Definition**

Initial set in place in final location of adsorbers HOP-ADBR-00001A, -00001B, -00002A, and -00002B, excluding permanent installation

Inclusions

1. Installation and inspection acceptance that the adsorbers are located in their correct location and orientation
2. Adsorbers will be in a condition that will not require repair, modification, or upgrades

Exclusions

1. Installation of platforms, ladders, handrails, and stairs associated with the adsorbers
2. Electrical and grounding connections
3. Piping and instrument connections to the skid
4. Installation of loose items and internals
5. Painting and painting touch up
6. Fireproofing and fireproofing touch up
7. Labeling
8. Removal of temporary construction aids and shipping aids
9. Installation of temporary protection for construction
10. Internal cleanliness inspection and acceptance

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH47208S1	Set Offgas Carbon Adsorber HOP-ADBR-1A&B 2A&B	4HH121005	FREP Slab on grade 1005

**Objective Evidence of Milestone Completion**

- Interim copy of special instruction for setting of adsorbers with sign offs for setting activities; alternatively, if the same scope is documented on a tank/vessel inspection record then this may also be used as objective evidence

**Contract Fee Milestones**  
**HLW-07**

Facility	Activity ID	Description
HLW	1GH15C1247	Complete HLW Pipe and Hanger Installation in PA06

**Milestone Definition**

Complete the installation of pipe and pipe hangers in planning area PA06.

Inclusions

1. Erection and inspection acceptance of pipe, valves, fittings, and in-line components
2. Erection and inspection acceptance of engineered and stock code pipe hangers

Exclusions

1. Pipe and hangers left out to provide construction access for follow-on construction activities
2. Pressure testing, leak testing, flushing, blowing, drying, and layup preservation of piping
3. In-line components left out per Startup request
4. Closure spools/welds to nozzles/equipment
5. Coatings and coatings touch up
6. Removal of temporary construction aids and/or temporary hangers
7. Grounding attachments
8. Labeling and tags
9. Insulation
10. Items and activities that do not prevent the piping from being tested
11. Final adjustment of pipe hanger components (spring can adjustments, for example, subsequent to pressure testing)
12. Completion of multi-commodity hangers insofar as the uncompleted items are not for pipe
13. Instrument connections, instrument tubing, and instruments
14. Hook up of electrically or pneumatically operated valves
15. Installation of access items (platforms, ladders, etc.) for piping access
16. Installation of valve handles
17. Subcontractor fire protection piping
18. Vendor piping on equipment skids

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH123023	FREP Elevated Slab 3023	4HH156A100	Install Pipe Drum Xfer Tunnel PA6A
4HH15029A3	Install Pipe & Hangers in Room B029 & 29A	4HH15160A9	Install Balance of Pipe & Hangers for PA6, PA6A, & PA6B
		4HH1506A00	Install Hangers – Drum Xfer Tunnel PA6A



**Contract Fee Milestones**  
**HLW-07**

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**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of piping and hangers in PA06, marked up to indicate piping and/or hangers excluded for follow-on construction activities
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed inspection records
- Document numbers for signed off installation records for piping and hanger installation corresponding to the milestone scope. These consist of the following types of records (or the equivalent in use at time of milestone completion): aboveground piping inspection records and pipe support installation records.
- Welding, nondestructive examination, and bolt torquing records are not included in the objective evidence because completion and acceptance of these is required prior to signing the piping and hanger installation records.

**Contract Fee Milestones**  
**HLW-08**

Facility	Activity ID	Description
HLW	1GH15C1248	Install Pipe and Hangers in PA02B

**Milestone Definition**

Complete pipe and pipe hanger installation in planning area PA02B.

Inclusions

1. Erection and inspection acceptance of pipe, valves, fittings, and in-line components
2. Erection and inspection acceptance of engineered and stock code pipe hangers

Exclusions

1. Pipe and hangers left out to provide construction access for follow-on construction activities
2. Pressure testing, leak testing, flushing, blowing, drying, layup preservation of piping
3. In-line components left out per Startup request
4. Closure spools/welds to nozzles/equipment
5. Coatings and coatings touch up
6. Removal of temporary construction aids and/or temporary hangers
7. Grounding attachments
8. Labeling and tags
9. Insulation
10. Items and activities that do not prevent the piping from being tested
11. Final adjustment of pipe hanger components (spring can adjustments for example subsequent to pressure testing)
12. Completion of multi-commodity hangers insofar as the uncompleted items are not for pipe
13. Instrument connections, instrument tubing, and instruments
14. Hook up of electrically or pneumatically operated valves
15. Installation of access items (platforms, ladders, etc.) for piping access
16. Installation of valve handles
17. Subcontractor fire protection piping
18. Vendor piping on equipment skids

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH15PA2B1	HLW - Install Pipe & Hangers PA02B	4HH122130	FREP Conc Wall 2130 (EL14)
4HH122170	FREP Conc Wall 2129B (EL 27.5 to 37)	4HH122132	FREP Conc Wall 2132 (EL 14 To 26.5)

**Contract Fee Milestones**  
**HLW-08**

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**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of piping and hangers in PA2B, marked up to indicate piping and/or hangers excluded for follow-on construction activities
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed inspection records
- Document numbers for signed off installation records for piping and hanger installation corresponding to the milestone scope. These consist of the following types of records (or the equivalent in use at time of milestone completion): aboveground piping inspection records and pipe support installation records.
- Welding, nondestructive examination, and bolt torquing records are not included in the objective evidence because completion and acceptance of these is required prior to signing the piping and hanger installation records

**Contract Fee Milestones**  
**HLW-09**

Facility	Activity ID	Description
HLW	1GH27C1249	Set HEPA Filter Housings at Elevation 14 Ft

**Milestone Definition**

Initial set in place in final location of the HEPA filter housing for C5V, HOP, and PJV system HEPA filters, excluding permanent installation.

Inclusions

Installation and inspection acceptance of the filter housing and support structure verifying correct location and orientation

Exclusions

1. Installation of platforms, ladders, handrails, and stairs associated with the filter housing
2. Electrical and grounding connections
3. Piping and instrument connections
4. Duct connections
5. Installation of loose items and internals
6. Painting and painting touch up
7. Fireproofing and fireproofing touch up
8. Labeling and tags
9. Removal of temporary construction aids and shipping aids
10. Installation of temporary protection for construction
11. Items and activities that will not prevent installation of HEPA filters
12. Internal cleanliness inspection and acceptance

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH2720595	HLW-Set PJV Filter Housings	4HH2720605	HLW-Set C5V Filter Housings
4HH2720525	HLW-Set HOP Filter Housings		

**Objective Evidence of Milestone Completion**

- Copy of material receiving report for HEPA filter housings
- Interim copy of special instruction (or alternative record in use at time of installation) for installation of HEPA filter housing with sign offs for installation activities inclusive of permanent attached to base support

**Contract Fee Milestones**  
**HLW-10**

Facility	Activity ID	Description
HLW	1GH36C1250	Set Offgas Catalytic Oxidizers HOP-SCO-00001 and 00004

**Milestone Definition**

Initial set in place in final location of the catalytic oxidizers HOP-SCO-00001 and HOP-SCO-00004, excluding permanent installation.

Inclusions

1. Installation and inspection acceptance that the oxidizers listed above are located in their correct location and orientation
2. Oxidizers will be in a condition that will not require repair, modification, or upgrades

Exclusions

1. Installation of platforms, ladders, handrails, and stairs associated with the catalytic oxidizers
2. Electrical and grounding connections
3. Piping and instrument connections
4. Installation of loose items and internals
5. Painting and painting touch up
6. Fireproofing and fireproofing touch up
7. Labeling
8. Removal of temporary construction aids and shipping aids
9. Installation of temporary protection for construction phase
10. Internal cleanliness inspection and acceptance

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH123004	FREP Slab 3004	4HH123005	FREP Slab 3005
4HH36208AA	Set -HO P-SKID-5 & 7 with HOP-SCO-1 & 4		

**Objective Evidence of Milestone Completion**

- Interim copy of special instruction for setting of catalytic oxidizers with sign offs for setting activities; alternatively, if the same scope is documented on a tank/vessel inspection record then this may also be used as objective evidence

**Contract Fee Milestones**  
**HLW-11**

Facility	Activity ID	Description
HLW	1GH27C1351	Installation of HLW HVAC Duct at Elevation 0 Ft Corridors

**Milestone Definition**

Complete the installation of HVAC duct at elevation 0 ft corridors.

Inclusions

1. Erection and inspection acceptance of HVAC duct and associated hangers
2. Dampers and in-line components

Exclusions

1. Duct left out to provide construction access for follow-on construction activities
2. Leak testing
3. In-line components left out per Startup request
4. Coatings touch up
5. Fireproofing and fireproofing touch up
6. Penetration seals
7. Removal of temporary construction aids and/or temporary hangers
8. Grounding attachments
9. Labeling and tags
10. Insulation
11. Installation of smoke detectors
12. Items and activities that will not prevent duct from being leak tested
13. Completion of multi-commodity hangers insofar as the uncompleted items are not for duct
14. Instrument connections, instrument tubing, and instruments
15. Electrical and instrumentation cabling
16. Installation of access items (platforms, ladders, etc.) for duct and duct equipment access
17. Final connections to equipment

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH2710810	S/C Install HVAC Duct (EL 0 ) PA #08	4HH27211D0	S/C Install HVAC Duct (EL +0) PA #11D
4HH27211C1	HLW – S/C Install HVAC Duct (EL+0) PA#11C	4HH27211A1	HLW- S/C Install HVAC Duct PA #11A
4HH27211E1	S/C Install HVAC Duct (EL 0) Planning Area 11E	4HH27211F1	S/C Install HVAC Duct (EL 0) Planning Area 11F
4HH27211B1	S/C Install HVAC Duct & C5V-CCL-6 H-B044	4HH27211G1	S/C Install HVAC Duct (EL 0) Planning Area 11G
4HH27110B2	S/C Install HVAC Duct HMB048 PA#10B		

**Contract Fee Milestones**  
**HLW-11**

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**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of HVAC duct at elevation 0 ft, marked up to indicate duct excluded for access for follow-on construction activities
  - Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed subcontractor inspection records
  - Copies of signed subcontractor inspection records for duct installation acceptance
-

**Contract Fee Milestones**  
**HLW-12**

Facility	Activity ID	Description
HLW	1GH14C1352	Complete HLW Annex Building Weathering

**Milestone Definition**

Complete the installation of siding and roof for HLW Facility Annex.

Inclusions

Erection and inspection acceptance of siding and roof panels and associated supports in accordance with drawings and specifications

Exclusions

1. Siding and roof panels left out to provide construction access (not exceeding one percent of total surface area)
2. Coatings and coatings touch up
3. Permanent penetration seals
4. Removal of temporary construction aids
5. Grounding attachments
6. Labeling and signs
7. Attachment of lighting fixtures and other equipment items
8. Doors, windows, and louvers
9. Items and activities that will not interfere with immediate weather protection

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH1450815	HLW S/C Install Roofing & Siding - Entire Annex		

**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of Annex siding and roof, marked up to indicate areas excluded for construction access
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed subcontractor inspection records
- Copies of signed subcontractor inspection records for siding and roof installation acceptance



**Contract Fee Milestones  
 HLW-13**

Facility	Activity ID	Description
HLW	1GH46C1453	Set HLW HEME Vessels 2A and 2B at Elevation 0 Ft

**Milestone Definition**

Initial set in place in final location of high-efficiency mist eliminator vessels HOP-HEME-0002A and -0002B, excluding permanent installation.

Inclusions

1. Installation and inspection acceptance that the vessels listed above are located in their correct location and orientation including final fixing into position
2. Vessels will be in a condition that will not require repair, modification, or upgrades

Exclusions

1. Installation of platforms, ladders, handrails, and stairs associated with the vessels
2. Electrical and grounding connections
3. Piping and instrument connections
4. Installation of loose items and internals
5. Painting and painting touch up
6. Fireproofing and fireproofing touch up
7. Labeling and tags
8. Removal of temporary construction aids and shipping aids
9. Installation of temporary protection for construction phase
10. Internal cleanliness inspection and acceptance

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH123158	FREP Concrete Wall 3109B	4HH123148	FREP Concrete Wall 3107A
4HH13202B6	S/C Install SS Liner (EI+0) PA2B H-0106	4HH123156	FREP Concrete Wall 3108A
4HH46102BB	Set Melter HEME Vessels – 2A/2B		

**Objective Evidence of Milestone Completion**

- Copy of material receiving report for high-efficiency mist eliminator vessels
- Copy of special instruction for installation of vessels with sign offs for setting activities; alternatively, if the same scope is documented on tank/vessel inspection records then these may also be used as objective evidence

**Contract Fee Milestones**  
**HLW-14**

Facility	Activity ID	Description
HLW	1GH12C1454	Placement of HLW Concrete Slabs at Elevation 58 Ft

**Milestone Definition**

Complete the placement of elevation 58 ft concrete slabs.

Inclusions

Placement and inspection acceptance of concrete and all associated embeds and penetrations

Exclusions

1. Formwork and/or shoring removal
2. Pour backs for construction access
3. Cosmetic surface repairs
4. Coatings
5. Items and activates that do not affect the structural integrity of the concrete slabs

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH124001	FREP Slab 4001	4HH124017	FREP Slab 4017
4HH124002	FREP Slab 4002	4HH124018	FREP Slab 4018
4HH124003	FREP Slab 4003	4HH124020	FREP Slab 4020
4HH124004	FREP Slab 4004	4HH124021	FREP Slab 4021
4HH124005	FREP Slab 4005	4HH124022	FREP Slab 4022
4HH124006	FREP Slab 4006	4HH124023	FREP Slab 4023
4HH124007	FREP Slab 4007	4HH124024	FREP Slab 4024
4HH124008	FREP Slab 4008	4HH124025	FREP Slab 4025
4HH124009	FREP Slab 4009	4HH124026	FREP Slab 4026
4HH124010	FREP Slab 4010	4HH124027	FREP Slab 4027
4HH124011	FREP Slab 4011	4HH124028	FREP Slab 4028
4HH124012	FREP Slab 4012	4HH124029	FREP Slab 4029
4HH124013	FREP Slab 4013	4HH124030	FREP Slab 4030
4HH124014	FREP Slab 4014	4HH124031	FREP Slab 4031
4HH124015	FREP Slab 4015	4HH124032	FREP Slab 4032
4HH124016	FREP Slab 4016	4HH124033	FREP Slab 4033
4HH124019	FREP Slab 4019	4HH124034	FREP Slab 4034
4HH124036	FREP Slab 4036	4HH124035	FREP Slab 4035

**Contract Fee Milestones**  
**HLW-14**

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**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of slabs at elevation 58 ft, marked up to indicate slabs excluded for construction access
  - Indication to demonstrate the milestone scope depicted on sketch or drawing is covered by signed pour cards
  - Copies of concrete pour cards with sign offs for placement acceptance checklists
-

**Contract Fee Milestones  
 HLW-15**

Facility	Activity ID	Description
HLW	1GH46C1555	Move HLW Melter 1 into Building

**Milestone Definition**

Move melter 1 to design location to allow melter jumper installation to proceed.

Inclusions

Moving the melter into design location

Exclusions

1. Installation of melter jumpers
2. Final alignments
3. Coatings and coatings touch up
4. Removal of temporary construction aids and restraints
5. Labeling and tags
6. Subsequent movement of melter for potential remotability testing
7. Items and activities that do not prevent jumper installation

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH46202A9	Assembly - Melter 1	4HH46102A2	HLW - Move - Melter 1 into building

**Objective Evidence of Milestone Completion**

- Copies of signed off record(s) for melter movement; this will consist of special instructions signed off to indicate movement is complete (or equivalent inspection records in use at time of setting door)

**Contract Fee Milestones**  
**HLW-16**

Facility	Activity ID	Description
HLW	1GH27C1556	Set C2V/C3V Air Handling Units at Elevation 58 Ft

**Milestone Definition**

Initial set in place in final location of C2V system air handling units C2V-AHU-00004A, -00004B, and -00004C , and C3V system air handling units C3V-AHU-00001A and -00001B at elevation 58 ft, excluding permanent installation

**Inclusions**

1. Installation and inspection acceptance that the air handling units listed above are located in their correct location and orientation including final fixing into position
2. Units will be in a condition that will not require repair, modification, or upgrades

**Exclusions**

1. Final alignments for motor/fan couplings
2. Installation of associated control panels
3. Electrical and grounding connections
4. Piping and instrument connections
5. Duct connections
6. Installation of loose items and internals
7. Painting and painting touch up
8. Fireproofing and fireproofing touch up
9. Labeling and tags
10. Removal of temporary construction aids and shipping aids
11. Installation of temporary protection for construction
12. Internal cleanliness inspection and acceptance
13. Items and activities that will not prevent connection of the duct, controls and utilities

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH124021	FREP Slab 4021	4HH124023	FREP Slab 4023
4HH124022	FREP Slab 4022	4HH27514CD	Set C2V-AHU-4A-C PG4
4HH2714120	Set C3V-AHU-1 A&1B PG7		

**Objective Evidence of Milestone Completion**

- Copy of material receiving report for air handling units
- Copy of special instructions (or alternative record in use at time of installation) for setting C2V and C3V system air handling units, with sign offs for setting activities

**Contract Fee Milestones**  
**HLW-17**

Facility	Activity ID	Description
HLW	1GH14C1557	Complete HLW Main Building Weathering

**Milestone Definition**

Complete the installation of siding and roof for HLW main building.

Inclusions

Erection and inspection acceptance of siding and roof panels and associated supports for the main HLW building in accordance with specifications

Exclusions

1. Siding and roof panels left out to provide construction access (not exceeding one percent of total surface area)
2. Coatings and coatings touch up
3. Permanent penetration seals
4. Removal of temporary construction aids
5. Grounding attachments
6. Labeling and signs
7. Attachment of lighting fixtures and other equipment items
8. Doors, windows, and louvers
9. Items and activities that do not interfere with immediate weather protection

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4HH1471010	S/C Install Siding Elev 60 to 91 and Roof - Main Bldg		

**Objective Evidence of Milestone Completion**

- Sketch or drawing showing scope of main HLW building siding and roof marked up to indicate areas excluded for construction access
- Indication to demonstrate the milestone scope depicted on the sketch or drawing is covered by signed subcontractor inspection records
- Copies of signed subcontractor inspection records for siding and roof installation acceptance
- Copies of open punch list items and open nonconformance reports, construction deficiency reports, and field checklists

**Contract Fee Milestones**  
**HLW-18**

Facility	Activity ID	Description
HLW	1GH00C1558	HLW Construction Commence Turnover to Startup (Electrical System Package)

**Milestone Definition**

Demonstrate HLW construction readiness to commence turnover to Startup by completing turnover of the electrical system package. This consists of the low (LVE) and medium (MVE) voltage systems.

Inclusions

Included in Definition

Exclusions

1. Electrical system (LVE and MVE) category B and E punch list items as defined in 24590-WTP-GPG-CON-1601, *Control of Punch List Items*
2. Testing activities that are within Startup scope per, division of responsibility contained in 24590-WTP-GPP-MGT-042, *Construction to Startup Turnover*
3. Removal of temporary construction aids (temporary power, etc.)
4. Turnover of all documentation
5. Startup final acceptance signatures of electrical system package turnover (LVE and MVE)

**Key Predecessors**

- Refer to BNI target schedule for key predecessors.

**Objective Evidence of Milestone Completion**

- Copy of signed (by Construction Management) electrical system turnover package (LVE and MVE)
- Copies of electrical system (LVE and MVE) open B and E punch list items

**Contract Fee Milestones**  
**HLW-19**

Facility	Activity ID	Description
HLW	1GHC2S1659	Demonstrate Canister Lid Weld

**Milestone Definition**

Demonstrate that the canister lid welder installed in the canister handling cave produces a satisfactory canister weld as evidenced by meeting the welder's test acceptance criteria. Key predecessor activities for the HPH system exclude equipment unrelated to operation of the welder.

Inclusions

Included in Definition

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
5HHC2HPHIA	Startup Accept from Construction HPH	5HHC2HPHAA	HLW SU Perform Component Testing HPH

**Objective Evidence of Milestone Completion**

- Copy of the test report section(s) related to the canister welder or test report section(s) viewable in Project Document Control



**Contract Fee Milestones**  
**HLW-20**

Facility	Activity ID	Description
HLW	1GHC2S1660	HLW Final System Turnover Complete

**Milestone Definition**

Demonstrate HLW construction completion by acceptance of turnover of the final system by Startup.

Inclusions

Included in Definition

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
5HHC2CHWIA	HLW SU Accept From Construction CHW	5HHC2HRHIA	HLW SU Accept From Construction HRH
5HHC2DIWIA	HLW SU Accept From Construction DIW	5HHC2MH1IA	HLW SU Accept From Construction HMH1
5HHC2DOWIA	HLW SU Accept From Construction DOW	5HHC2SH1IA	HLW SU Accept From Construction HSH1
5HHC2ISAIA	HLW SU Accept From Construction ISA	5HHC2AMRIA	HLW SU Accept From Construction AMR
5HHC2PSWIA	HLW SU Accept From Construction PSW	5HHC2EMJIA	HLW SU Accept From Construction EMJ
5HHC2HPSIA	HLW SU Accept From Construction HPS	5HHC2MH2IA	HLW SU Accept From Construction HMH2
5HHC2LPSIA	HLW SU Accept From Construction LPS	5HHC2MP1IA	HLW SU Accept From Construction HMP1
5HHC2PCWIA	HLW SU Accept From Construction PCW	5HHC2NARIA	HLW SU Accept From Construction NAR
5HHC2SCWIA	HLW SU Accept From Construction SCW	5HHC2RLDIA	HLW SU Accept From Construction RLD
5HHC2DCEIA	HLW SU Accept From Construction DCE	5HHC2SHRIA	HLW SU Accept From Construction SHR
5HHC2LVEIA	HLW SU Accept From Construction LVE	5HHC2ASXIA	HLW SU Accept From Construction ASX
5HHC2MVEIA	HLW SU Accept From Construction MVE	5HHC2C3VIA	HLW SU Accept From Construction C3V
5HHC2LTEIA	HLW SU Accept From Construction LTE	5HHC2HPHIA	HLW SU Accept From Construction HPH
5HHC2HTEIA	HLW SU Accept From Construction HTE	5HHC2FDEIA	HLW SU Accept From Construction FDE
5HHC2NLDIA	HLW SU Accept From Construction NLD	5HHC2FPWIA	HLW SU Accept From Construction FPW
5HHC2UPEIA	HLW SU Accept From Construction UPE	5HHC2SH2IA	HLW SU Accept From Construction HSH2

**Contract Fee Milestones  
 HLW-20**

5HHC2GF1IA	HLW SU Accept From Construction HGF1	5HHC2PWDIA	HLW SU Accept From Construction PWD
5HHC2GF2IA	HLW SU Accept From Construction HGF2	5HHC2C2VIA	HLW SU Accept From Construction C2V
5HHC2C1VIA	HLW SU Accept From Construction C1V	5HHC2HFHIA	HLW SU Accept From Construction HFH
5HHC2FP1IA	HLW SU Accept From Construction HFP1	5HHC2RPJIA	HLW SU Accept From Construction RPJ
5HHC2FP2IA	HLW SU Accept From Construction HFP2	5HHC2RWHIA	HLW SU Accept From Construction RWH
5HHC2PJVIA	HLW SU Accept From Construction PJV	5HHC2MP2IA	HLW SU Accept From Construction HMP2
5HHC2CMEIA	HLW SU Accept From Construction CME	5HHC2HDHIA	HLW SU Accept From Construction HDH
5HHC2MHJIA	HLW SU Accept From Construction MHJ	5HHC2OP1IA	HLW SU Accept From Construction HOP1
5HHC2PCJIA	HLW SU Accept From Construction PCJ	5HHC2BSAIA	HLW SU Accept From Construction BSA
5HHC2PPJIA	HLW SU Accept From Construction PPJ	5HHC2HEHIA	HLW SU Accept From Construction HEH
5HHC2PTJIA	HLW SU Accept From Construction PTJ	5HHC2OP2IA	HLW SU Accept From Construction HOP2
5HHC2C5VIA	HLW SU Accept From Construction C5V		

**Objective Evidence of Milestone Completion**

- Copy of signed (by Startup Manager) accepted turnover package for the final HLW system or final system turnover package viewable in Project Document Control

**Contract Fee Milestones**  
**LAW-01**

Facility	Activity ID	Description
LAW	1GL47P0922	Receive Offgas Mercury Adsorber, PA #09A EL+48

**Milestone Definition**

Receive and accept at Marshalling Yard the offgas mercury adsorbers. Includes the following tag IDs:

- LVP-ADBR-00001A
- LVP-ADBR-00001B

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9ZL471510M	LAW - MY QC/MRR Offgas Mercury Adsorber		

**Objective Evidence of Milestone Completion**

- BNI shall provide documented evidence to DOE of the receipt of equipment per WTP procedure 24590-WTP-GPP-GPT-00100 "Traffic and Logistics".
- Completion of the milestone will include issuance to PDC of the G321V. In addition, completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control.

**Contract Fee Milestones**  
**LAW-02**

Facility	Activity ID	Description
LAW	1GL36P1027	CATOX LVP-SKID-00002 Received and Ready to Install

**Milestone Definition**

Receive and accept the LAW melter offgas catalytic oxidizer procured under MBT0-00007. Includes the following tag ID:

- LVP-SKID-00002

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9FL36426L3	LAW-MS DMY: MBT0-07 Thermal Catalytic Oxidizer	9ZL363790M	LAW – QC/MRR MBT0-07 Thermal Catalytic Oxidizer

**Objective Evidence of Milestone Completion**

- BNI shall provide documented evidence to DOE of the receipt of equipment per WTP procedure 24590-WTP-GPP-GPT-00100 "Traffic and Logistics".
- Completion of the milestone will include issuance to PDC of the G321V. In addition, completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control.

**Contract Fee Milestones**  
**LAW-03**

Facility	Activity ID	Description
LAW	1GL46P1030	Melter 2 Lid and Balance of Components - Fabrication Complete Ship in Place

**Milestone Definition**

Milestone includes any hardware purchased under QL-POA-MEEM-00001 needed to support completion of site assembly.

Inclusions

N/A

Exclusions

Spare parts and/or tools required for operations

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9FL46ML8M1	LAW Fab Lid & Balance of Melter #2 Components	9FL46ML8M5	LAW – Prepare/Approve Ship-in-Place Documentation – Melter #1 and #2

**Objective Evidence of Milestone Completion**

- BNI shall provide evidence to DOE of completion of ship in place documentation.
- Completion of the milestone will include issuance to PDC of the G321V.

**Contract Fee Milestones**  
**LAW-04**

Facility	Activity ID	Description
LAW	1GL00C1505	Complete Melter 1 Movement into Building

**Milestone Definition**

Scope to include completion of Melter #1 site assembly and movement from the melter assembly pad to the permanent plant location.

Inclusions

N/A

Exclusions

1. Melter offgas pipe, electrical buss, and general jumper connections (installations to be sequenced with the startup component check out requirements)
2. Final alignments
3. Open punch list items that do not impede follow on activities (note above)
4. Coatings and final touch up
5. Removal of temporary construction aids
6. Labeling and tags
7. Subsequent movement of melter for potential remotability testing

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4LL004698F	LAW - Melter #1 Move Into Building	4LL4602B81	LAW - Move & Install Melter #1

**Objective Evidence of Milestone Completion**

- Provide notification of contract completion milestone along with signed test copies. Provide copy of signed off record(s) for melter movement. This will consist of special instructions signed off to indicate movement is complete (or equivalent inspection records in use at time of movement).

**Contract Fee Milestones**  
**LAW-05**

Facility	Activity ID	Description
LAW	1GL00C1515	Complete Melter 2 Movement into Building

**Milestone Definition**

Scope to include completion of Melter #2 site assembly and movement from the melter assembly pad to the permanent plant location.

Inclusions

N/A

Exclusions

1. Melter offgas pipe, electrical buss, and general jumper connections (installations to be sequenced with the startup component check out requirements)
2. Final alignments
3. Open punch list items that do not impede follow on activities (note above)
4. Coatings and final touch up
5. Removal of temporary construction aids
6. Labeling and tags
7. Subsequent movement of melter for potential remotability testing

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4LL004699F	LAW - Melter #2 Move Into Building	4LL4602B82	LAW - Move & Install Melter #2

**Objective Evidence of Milestone Completion**

- Provide notification of contract completion milestone along with signed test copies. Provide copy of signed off record(s) for melter movement. This will consist of special instructions signed off to indicate movement is complete (or equivalent inspection records in use at time of movement).

**Contract Fee Milestones**  
**LAB-03**

Facility	Activity ID	Description
LAB	1GT47C1356	Complete Installation of Autosampler System

**Milestone Definition**

Scope to include mechanical completion of the Autosampler System in the LAB facility only.

Inclusions

N/A

Exclusions

Pneumatic transfer (flight tube) components yet to be sequenced with the pipe rack installation (PT access priorities)

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4TT4705	LAB - Install Autosampler Systems Completion	9FT4719D8	LAB - ASX Equipment DMY
9ZT471913M	LAB - MY QC & MRR - ASX - Autosamplers	3ET47191C1	LAB - MS All VPs to Code 1

**Objective Evidence of Milestone Completion**

- Following physical walk-down, inspections, and records review, BNI to provide notification of contract milestone completion to DOE-WTP.



**Contract Fee Milestones**  
**BOF-01**

Facility	Activity ID	Description
BOF	1GB47P1040	Receive Anhydrous Ammonia System

**Milestone Definition**

BOF receive Anhydrous Ammonia equipment procured under CM-MRA-MS00-00021 and QL-MRA-MVSC-00002. Includes the following tag IDs:

- CM-MRA-MS00-00021: AMR-VPR-00002 & 00003
- QL-MRA-MVSC-00002: AMR-VSL-00003 & 00004

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
9FB47376C2	BOF - DMY - Anhydrous Ammonia Strg/Sply	9ZB47376C3	BOF - MS- MRR- Anhydrous Ammonia Strg/Sply
9FB47353F3	BOF - DMY - Anhydrous Ammonia Strg AAS Vessels	9ZB47353F4	BOF MS MRR- Anhydrous Ammonia Strg AAS Vessels

**Objective Evidence of Milestone Completion**

- BNI shall provide documented evidence to DOE of the receipt of equipment per WTP procedure 24590-WTP-GPP-GPT-00100 "Traffic and Logistics".
- Completion of the milestone will include issuance to PDC of the G321V. In addition, completion of this milestone will include a screen shot from the Bechtel Procurement System demonstrating that the material receiving report number has been issued for the specific shipment and the material receiving report has been completed and issued by Project Document Control

**Contract Fee Milestones**  
**BOF-02**

Facility	Activity ID	Description
BOF	1GB5MC1043	Complete Construction of Water Treatment Building

**Milestone Definition**

This milestone assumed complete when the physical work for the facility has been completed and is in a state that allows systematic turnover to the startup group to proceed.

Inclusions

Substantial installation of commodities, verified by a joint construction walk-down and use of other Bechtel reporting tools

Exclusions

1. Coatings touch up
2. Penetration seals
3. Partition wall repairs, if any
4. Labeling and tags
5. Equipment and/or pipe insulation
6. Items held out at Startup's request (for example):
  - a. Pipe flush spool removal
  - b. Final pipe hanger settings
  - c. Piping in-line devices (for flushing)
  - d. General instrumentation (for damage)
  - e. Electrical cable terminations (formed but not landed)
7. Removal of construction aids (scaffold, other)
8. Final work package documentation
9. CME system and DCS/ICN (PCJ) system scope

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4BB165M040	BOF - Install Terminations (Bldg 86)	4BB15WT050	BOF - Install Misc. Pipe (Bldg 86)
4BB10GM160	BOF - Cmpnt Const Water Treatment Bldg		

**Objective Evidence of Milestone Completion**

- Following physical walk-down, inspections and records review, BNI to provide notification of contract milestone completion to DOE-WTP.

**Contract Fee Milestones**  
**BOF-03**

Facility	Activity ID	Description
BOF	1GB5JC1046	Complete Chiller Compressor Plant Construction

**Milestone Definition**

This milestone assumed complete when the physical work for the facility has been completed and is in a state that allows systematic turnover to the startup group to proceed.

Inclusions

Substantial installation of commodities, verified by a joint construction walk-down and use of other Bechtel reporting tools

Exclusions

1. Coatings touch up
2. Penetration seals
3. Partition wall repairs, if any
4. Labeling and tags
5. Equipment and/or pipe insulation
6. Items held out at Startup's request (for example):
  - a. Pipe flush spool removal
  - b. Final pipe hanger settings
  - c. Piping in-line devices (for flushing)
  - d. General instrumentation (for damage)
  - e. Electrical cable terminations (formed but not landed)
7. Removal of construction aids (scaffold, other)
8. Final work package documentation
9. CME and DCS/ICN (PCJ) system scope

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4BB13CCP01	BOF - Misc. Steel - Chiller/Comp Plant	4BB17010Z	BOF - Instrumentation - CCP
4BB10GM105	BOF - Cmpt Const Chiller/Compressor Plant		

**Objective Evidence of Milestone Completion**

- Following physical walk-down, inspections and records review, BNI to provide notification of contract milestone completion to DOE-WTP.

**Contract Fee Milestones**  
**BOF-05**

Facility	Activity ID	Description
BOF	1GBC2S1463	Complete Electrical Distribution System Testing MVE (Site Energization)

**Milestone Definition**

All component and system level testing within the BOF power distribution systems (MVE) has been completed. Scope of checkout and energization to within switchgear building #87.

Inclusions

N/A

Exclusions

1. Power distribution checkout in each individual BOF facility outside switchgear building #87.
2. Power distribution from building #89 (Diesel Generator Facility) which includes the Standby Diesel Generator.

**Key Predecessors**

Activity ID	Description	Activity ID	Description
5HBC2A5PZA	BOF SU Perform Component Testing SG	5HBC2A5PEA	BOF SU Perform System Testing SG

**Objective Evidence of Milestone Completion**

- Provide notification of contract completion milestone to DOE-WTP along with signed test copies.

**Contract Fee Milestones**  
**BOF-06**

Facility	Activity ID	Description
BOF	1GB12C1253	Complete Emer. Diesel Gen. Base Slab

**Milestone Definition**

Complete formwork, reinforcing bar, embeds, and concrete placement of the base slab for the Emergency Diesel Generator facility. Predecessors may be updated per #TN-BCP-3672 once approved.

Inclusions

N/A

Exclusions

N/A

**Key Predecessors**

Activity ID	Description	Activity ID	Description
4BB122048B	BOF FREP Emergency Diesel Tank Foundations -DG	3EG360981G	MS Award Pres Vsl Shop Fab Q-MA-MVSC-01
3EB12CS400	C/S - Design Emergency - DSL GEN FDN	9FB360982X	MS - VP Code 1/SDDR: Q-MA-MVSC-01 DFO
9ZB3606560	BOF- Vendor Foundation Loads - (DSL TNKS)		

**Objective Evidence of Milestone Completion**

- Following physical walk-down, inspections and records review, BNI to provide notification of contract milestone completion to DOE-WTP.

Note: This Milestone Definition is currently undergoing a revision, which will be documented in a future contract modification.

**Contract Fee Milestones**  
**BOF-07**

Facility	Activity ID	Description
BOF	1GB28C1360	Set (2) Emergency Diesel Generators

**Milestone Definition**

Receive on site and rough set (2) ITS Diesel Generators. Predecessors may be updated per #TN-BCP-3672 once approved.

Inclusions

N/A

Exclusions

Permanent anchorage and follow-on pipe and electrical attachments are excluded. Also, excludes installation of the standby diesel generators.

**Key Predecessor Listing**

Activity ID	Description	Activity ID	Description
4BB28048A	BOF - Set (2) ITS Diesel Generators		

**Objective Evidence of Milestone Completion**

- Following physical walk-down, inspections and records review BNI to provide notification of contract milestone completion to DOE-WTP.

Note: This Milestone Definition is currently undergoing a revision, which will be documented in a future contract modification.

**Contractor's Statement of Release:** In consideration of the Modification agreed to herein as complete equitable adjustment, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to the changes as noted in this modification.

**All other terms and conditions remain unchanged.**

**(End of Modification)**

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