
From: Owings, Deanne
Sent: Wednesday, August 07, 2013 3:46 PM
To: Cuevas, Luis (WTP)
Subject: PERFORMANCE CONTRACTING, INC. D/B/A PCI PROMATEC | ADVANCE NOTIFICATION FOR AWARD | SUBCONTRACT NO.: 24590-CM-FC1-AYFP-00001 | SENSITIVE

Date: August 7, 2013

Subject: **CONTRACT NO. DE-AC27-01RV14136**

HANFORD WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP)

ADVANCE NOTIFICATION FOR AWARD - SENSITIVE

SUBCONTRACTOR: Performance Contracting, Inc. d/b/a PCI Promatec

SUBCONTRACT NO. 24590-CM-FC1-AYFP-00001

SERVICE: LAW AND LAB PENETRATION SEALS

Dear Mr. R. L. Dawson:

In accordance with Article 1.85 of the subject contract between the Department of Energy and Bechtel National, Inc. (BNI), this email constitutes BNI's advance notification of our intent to issue a subcontract as follows:

PURPOSE

Bechtel National, Inc. intends to award Subcontract Number 24590-CM-FC1-AYFP-00001 to Performance Contracting, Inc. d/b/a PCI Promatec.

BACKGROUND

Service/Description of Scope: This procurement action is to provide engineering, furnish, install, and inspect penetration and joint seals for the LAW and LAB Facilities.

Period of Performance: August 8, 2013 – June 10, 2015

Business Size Status: Large

Applicable Area: LAW and LAB

Acquisition Type: Competitive

Type of Subcontract: IDIQ

This Advance Notice relates to award as follows: BNI intends to award a subcontract to Performance Contracting, Inc. d/b/a PCI Promatec who is the lowest priced, technically acceptable responsive and responsible offeror for this scope of work.

THIS AWARD ACTION

Total Value of the Award \$14,020,749.56

Should there be any questions or the need for additional information, please contact Kristin Harris by telephone at 509-371-2789, or by email at klharri1@bechtel.com

ATTACHMENTS TO BE UPLOADED TO E-ROOM

Subk Cover Sheet

Exhibit C

Exhibit D

JBA

Technical Evaluation

cc: WTP PDC (with Pre-award/Revision file)
Larry Delucchi (ldelucch@bechtel.com)
Lori Baker (lbaker@bechtel.com)
George Champlain (George_F_Champlain@orp.doe.gov)
Kristin Harris (kharris1@bechtel.com)
Luis Cuevas (lcuevas@bechte.com)
Deanne Owings (dowings@bechtel.com)
Laurie Nearing (lnearing@bechtel.com)
Barb Uribe (bluribe@bechtel.com)
Karen Maynes (kamaynes@bechtel.com)



YFP-00001_Advanc
Notification...



AYFP-00001 Form
of Agreement.p...



AYFP-00001
Exhibit C.pdf



AYFP-00001
Exhibit D.pdf



JBA.pdf



Technical
Evaluation Docu...

Deanne Owings
Lead Subcontract Administrator
Procurement and Subcontracts
Bechtel National, Inc.
Waste Treatment and Immobilization Plant
(509) 373-8392

**BECHTEL NATIONAL, INC.
HANFORD TANK WASTE TREATMENT AND
IMMOBILIZATION PLANT**

ENGINEER, PROCURE AND CONSTRUCT (EPC) SUBCONTRACT

SUBCONTRACT FORM OF AGREEMENT

SUBCONTRACTOR:	<u>Performance Contracting, Inc. d/b/a PCI Promatec</u>	Subcontract No.:	<u>24590-CM-FC1-AYFP-00001</u>
Address:	<u>422 South Forest St. Seattle, WA 98134</u>	Work Location:	<u>Richland, Washington</u>
Contact:	<u>Justin Roy</u>	Issuing Office:	<u>Bechtel National, Inc.</u>
Telephone:	<u>206-623-8750</u>	Address:	<u>2435 Stevens Center Place Richland, WA 99354</u>
Email Address:	<u>Justin.Roy@pcg.com</u>		
Facsimile:	<u>206-623-2091</u>	Register No.:	
D-U-N-S No.:	<u>17-3552423</u>	Goods and Services Code:	<u>AYFP</u>

This Subcontract is effective as of the 31st day of July, 2013 between Bechtel National, Inc. (CONTRACTOR), and the above named SUBCONTRACTOR who hereby agrees that all Work specified below shall be performed by SUBCONTRACTOR in accordance with all the provisions of this Subcontract, consisting of the following Subcontract documents and subsequent changes thereto:

Subcontract Form of Agreement

Exhibit "A" - General Conditions	dated: July 24, 2013
Exhibit "B" - Special Conditions	dated: July 24, 2013
Exhibit "C" - Quantities, Pricing, and Data	dated: July 24, 2013
Exhibit "D" - Scope of Work and Technical Requirements	dated: July 24, 2013
Exhibit "E" - Technical Specifications	dated: July 24, 2013
Exhibit "F" - Drawings	dated: July 24, 2013
Exhibit "G" - Subcontractor Safety and Health Requirements	dated: July 24, 2013
Exhibit "H" - Site Stabilization Agreement	dated: July 24, 2013
Exhibit "I" - Subcontractor Submittal Requirements	dated: July 24, 2013
Exhibit "J" - Quality Assurance Program	dated: July 24, 2013

- WORK TO BE PERFORMED:** Except as specified elsewhere in the Subcontract, SUBCONTRACTOR shall furnish all plant; labor; materials; tools; supplies; equipment; transportation; supervision; technical, professional and other services; and shall perform all operations necessary and required to satisfactorily:

Provide technical and professional services to engineer, furnish and install, and inspect penetration and joint seals; engineering for development of Engineering Judgments, new designs, testing and interpretations and

analysis of test results, and supply of penetration and joint seal designs and material; coordination of shipping, transportation, delivery and temperature controlled storage of materials; supply construction supervision, labor, inspection, testing, Quality Verification Record Packages (QVRPs), documentation packages, equipment, motorized man lifts, tools, consumables and supplies, miscellaneous materials, and incidentals required for installations; overhead and profit, and all other costs, whether direct or indirect, required to complete the LAW/LAB Penetration and Joint Seals

The Work is a portion of the services to be provided by CONTRACTOR to the United States of America (OWNER) under Contract Number DE-AC27-01RV14136.

2. **SCHEDULE:** The Work shall be performed in accordance with the dates set forth in the Exhibit "B" clause titled, "COMMENCEMENT, PROGRESS AND COMPLETION OF THE WORK."
3. **COMPENSATION:** As full consideration for the satisfactory performance by SUBCONTRACTOR of this Subcontract, CONTRACTOR shall pay to SUBCONTRACTOR compensation in accordance with the prices set forth in Exhibit "C," Quantities, Pricing, and Data, and with the payment provisions of this Subcontract.

This Subcontract embodies the entire agreement between CONTRACTOR and SUBCONTRACTOR and supersedes all other writings. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding not set forth herein.

CONTRACTOR:

BECHTEL NATIONAL, INC.

Authorized
Signature:



Print Name:

F. SALAMAN

Print Title:

ACQUISITION SERVICES MGR

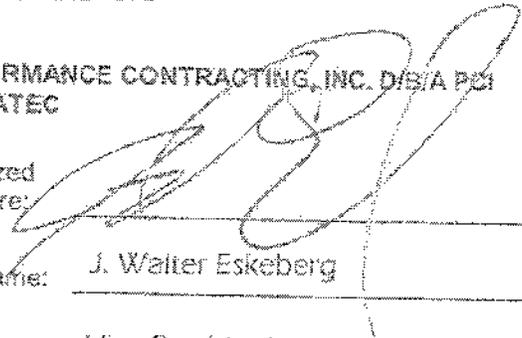
Date:

8/14/13

SUBCONTRACTOR:

PERFORMANCE CONTRACTING, INC. D/B/A PCI
FROMATEC

Authorized
Signature:



Print Name:

J. Walter Eskeberg

Print Title:

Vice President

Date:

08/13/13



PROPRIETARY AND CONFIDENTIAL

Memorandum

To: Lisa Carlin Date: 1/29/2013
From: W. D. Lowman CCN: 255029
Phone: 509-373-8391
Subject: 24590-CM-SRA-AYFP LAB/LAW CM PENETRATION SEAL
PRE-AWARD SUBCONTRACT TECHNICAL EVALUATION FOR
PERFORMANCE CONTRACTING, INC. DBA PCI PROMATEC

Reference: N/A

Please find attached the Pre-Award Technical Evaluation for Proposal for your use.



Will Lowman
Subcontract Technical Representative
CSA

Attachment Post-Award Technical Evaluation

Distribution

<u>Addressee</u>	<u>MSIN</u>	<u>Copy Coverage</u>	<u>MSIN</u>
Brown, Peter	Email	PADC	MS19-A
Cagle, Greg	Email		
Carlin, Lisa	Email		
Davin, T.A.	Email		
Kingman, M.R.	Email		
Lowman, W.D.	Email		
Lung, Bill	Email		
Stone, Wes	Email		



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001 CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

Proposal Description: LAW/LAB Penetration Seals

Date: 16 January 2013 Requestor: L. Carlin Evaluator: W. D. Lowman

A. OVERALL PROPOSAL ASSESSMENT Yes No

- 1 Is all the technical information requested from the Supplier/Subcontractor included in the proposal? (b)(5)
 identify what is missing.
- 2 Is the proposed Supplier's/Subcontractor's performance work statement adequately compatible with the requirements? (b)(5)
 identify what is missing.
- 3 Does the Supplier/Subcontractor appear to understand the requirements? (b)(5)
 provide the basis for this determination.

B. SAFETY ASSESSMENT Yes No N/A

Section is: Applicable Not applicable

- 1 Did the Supplier/Subcontractor submit all requested safety and health information? (b)(5)
 identify what is missing.
- 2 Does the Supplier's/Subcontractor's safety and health records meet the requirements for work on WTP or has an acceptable mitigation plan been proposed/provided? (b)(5)
 provide a determination of whether a mitigation plan can be implemented to address health and safety performance requirements.



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

C. QUALITY ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

1 Is the Supplier's/Subcontractor's facility acceptable to perform this work (e.g., based upon a shop visit)?

(b)(5)

Identify the actions taken to make this determination.

2 Has the Supplier's/Subcontractor's QA program been reviewed and accepted by Supplier Qualification?

(b)(5)

Identify restrictions and mitigation plan actions, if any.

(b)(5)

D. SCHEDULE ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

1 Is the Supplier's/Subcontractor's proposed schedule realistic and consistent with the overall requirements?

(b)(5)

(b)(5) explain why the schedule is not realistic.

2 Has sufficient time been allocated for each scheduled activity?

(b)(5)

(b)(5) explain which activities were not allocated sufficient time.

3 Have the resources been appropriately applied to the activities?

(b)(5)

(b)(5) explain what needs to change?

4 Has adequate time been allowed for qualification of foreign nationals (if proposed: see Section F, question 4 and Section I, question 4)?

(b)(5)

(b)(5) provide the basis for this determination.

5 Is the proposed schedule logic acceptable?

(b)(5)

(b)(5) provide the basis for this determination.



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-A'YFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

D. SCHEDULE ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

6 Are there interim and final milestones identified that lead to completion and are these milestones acceptable?

(b)(5)

(b)(5) provide the basis for this determination.

7 Does the proposed implementation schedule align with the WTP's needs?

(b)(5)

(b)(5) identify what actions need to be discussed with the Supplier/Subcontractor.

E. TECHNICAL APPROACH ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

1 Do the Supplier's/Subcontractor's proposed technical personnel have the work experience, expertise, and technical knowledge needed to perform this work?

(b)(5)

(b)(5) provide the basis for this determination.

2 Does the Supplier's/Subcontractor's proposed approach demonstrate their ability to complete the technical requirements?

(b)(5)

(b)(5) provide the basis for this determination.

3 Does the Supplier's/Subcontractor's proposal meet or exceed the minimum requirements for the work to be performed?

(b)(5)

(b)(5) identify what needs to change for the proposal to be acceptable.

Identify which technical approach activities (or personnel) exceed requirements.

4 Are the Supplier's/Subcontractor's proposed exceptions to requirements or qualifications acceptable?

(b)(5)

(b)(5) identify the unacceptable exceptions/qualifications and why they are unacceptable.

If exceptions/qualifications are provided, identify their impact to the WTP, and if accepted identify what technical documents need to be revised prior to an award for this proposal.

(b)(5)



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

E. TECHNICAL APPROACH ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

5 Are the Supplier's/Subcontractor's proposed assumptions to qualify their proposal acceptable?

(b)(5)

(b)(5) identify any incorrect or unacceptable assumptions and the basis for that determination. Identify what performance risk there might be if the assumptions are incorrect.

(b)(5)

6 Did the Supplier/Subcontractor provide an explanation of its basis of estimate and did they sufficiently detail the skill mix and quantity and types of labor hours, materials, and equipment required?

(b)(5)

(b)(5) provide the basis for this determination and identify any missing or questionable information.

F. DIRECT LABOR ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

1 Has sufficient manpower been identified and allocated to perform this work?

(b)(5)

(b)(5) identify any missing or questionable information.

2 Does the manpower loading match the schedule activity sequence and requirements?

(b)(5)

(b)(5) identify any missing or questionable information.

3 Is the proposed skill mix for each of the work tasks identified and appropriate?

(b)(5)

(b)(5) identify any missing or questionable information.

4 The Supplier/Subcontractor has proposed using foreign nationals for this scope of work, is that acceptable?

(b)(5)

Provide that basis for this determination and describe the circumstances that make this necessary.

5 Have the management and supervisory hours been estimated and are the values reasonable?

(b)(5)

(b)(5) identify any missing or questionable information.



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

F. DIRECT LABOR ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

6 Is the Supplier/Subcontractor proposed use of overtime to complete a portion of the work acceptable?

(b)(5)

(b)(5) provide the basis for this determination (i.e., Is overtime use justified?).

What WTP schedule impacts, if any, could occur if the use of overtime is denied?

(b)(5)

G. DIRECT MATERIALS ASSESSMENT

(b)(5) Section is: Applicable Not applicable

Yes No N/A

1 Are the proposed materials acceptable and consistent with the work scope, and based on the design documents and technical specifications?

(b)(5)

(b)(5) provide the basis for this determination, and identify which materials are unacceptable and why.

2 Are the quantities of each type of material consistent with the scope of work?

(b)(5)

(b)(5) provide the basis for this determination.

3 Are the proposed material substitution(s) (either alternate material type and/or manufacturer) acceptable and still comply with the technical specifications? (Coordinate your response with question E4)

(b)(5)

(b)(5) provide the basis for this determination, and identify which material substitutions are unacceptable and why.

H. EQUIPMENT ASSESSMENT (either fabrication or construction as appropriate)

Section is: Applicable Not applicable

Yes No N/A

1 Has the Supplier/Subcontractor proposed the appropriate types and quantities of equipment necessary to perform the work?

(b)(5)

If No, provide the basis for this determination.

(b)(5)

2 Is the proposed equipment readily available for use at the appropriate time?

(b)(5)

(b)(5) provide reasonable assurance that the Supplier/Subcontractor can acquire the equipment in sufficient time to meet the schedule requirements?



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

H. EQUIPMENT ASSESSMENT (either fabrication or construction as appropriate)		Yes	No	N/A
Section is: <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable				
Availability of equipment not identified, however equipment is typical local readily available construction equipment.				
3	Is the sequence and duration of equipment usage consistent with the proposed manpower loading and skill mix? <input type="checkbox"/> (b)(5) provide the basis for this determination.			<input type="checkbox"/> (b)(5)
4	Does the proposed equipment fit into the designated workspace for this work? If No, provide the basis for this determination. <input type="checkbox"/> (b)(5)			<input type="checkbox"/> (b)(5)

I. SUB-TIER CONTRACTORS ASSESSMENT		Yes	No	N/A
(b)(5) Section is: <input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable				
1	Is the Supplier's/Subcontractor's proposed use of sub-tier Supplier(s)/Subcontractor(s) to perform the work acceptable? <input type="checkbox"/> (b)(5) provide the basis for this determination, and identify sub-tier work that is problematic and why.			<input type="checkbox"/> (b)(5)
2	Is there sufficient information with which to judge the capability, capacity, and quality of workmanship of each proposed sub-tier? <input type="checkbox"/> (b)(5) provide the basis for this determination.			<input type="checkbox"/> (b)(5)
3	Is the proposed sub-tier(s) work consistent with the requirements of the Supplier's/Subcontractor's scope of work? <input type="checkbox"/> (b)(5) provide the basis for this determination.			<input type="checkbox"/> (b)(5)
4	Is the sub-tier(s) proposed appropriate levels of manpower, equipment, and skill mix to achieve their assigned scope of work acceptable? <input type="checkbox"/> (b)(5) provide the basis for this determination.			<input type="checkbox"/> (b)(5)



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

I. SUB-TIER CONTRACTORS ASSESSMENT

(b)(5) Section is: Applicable Not applicable Yes No N/A

5 Is the sub-tier(s) proposed use of foreign nationals for this scope of work acceptable?

(b)(5)

Provide the basis for this determination and describe the circumstances that make this necessary.

6 Can the sub-tier Supplier(s)/Subcontractor(s) provide the service requested in the timeframe required for this workload?

(b)(5)

(b)(5) *provide the basis for this determination.*

J. OTHER DIRECT COSTS ASSESSMENT

(b)(5) Section is: Applicable Not applicable Yes No N/A

1 Has the Supplier/Subcontractor identified procurement activities that would be classified as other direct costs (for example, procurement of shop equipment, tooling, computers, software, etc.), and are these activities reasonable and necessary?

Describe any inappropriate or questionable activities.

2 Are the Supplier/Subcontractor proposed travel costs to perform their work determined to be acceptable (e.g., identified need for travel, number of trips, number of people per trip which are reasonable to perform the scope of work)?

(b)(5) *provide the basis for this determination.*

3 If the answer to 2 is yes, are the needs for each trip, number of trips, and number of people per trip reasonable to perform the scope of work?

How do you know? If not, what needs to change?

K. ADDITIONAL WTP EFFORT ASSESSMENT

(b)(5) Section is: Applicable Not applicable Yes No N/A

1 Does the WTP require additional unbudgeted technical, expediting, supplier quality, or other resources to manage this work based upon the Supplier's/Subcontractor's proposal?

(b)(5)

If Yes, identify the additional resources required and a ROM (trend) estimate.

(b)(5)



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

K. ADDITIONAL WTP EFFORT ASSESSMENT		Yes	No	N/A
(b)(5) Section is:	<input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable			
2	Does the WTP need to expend additional unbudgeted travel based upon the Supplier's/Subcontractor's proposal? <input type="checkbox"/> identify the additional resources required and a ROM (trend) estimate.			(b)(5)

L. AREAS OF POTENTIAL NEGOTIATION	
(b)(5) Section is:	<input type="checkbox"/> Applicable <input type="checkbox"/> Not applicable
Identify and explain any areas where the supplier's proposal exceeds minimum/reasonable requirements that could be used as a basis for negotiation. For example hours spent on particular tasks, material types and quantities, number of travel trips and location, equipment purchases, other direct cost items, number of or technical qualifications of assigned personnel, etc.	
(b)(5)	
(b)(5) and	

M. ADDITIONAL COMMENTS (if necessary)
N/A

N. ACCEPTABILITY	Yes	No
Used on this performed technical evaluation, is the Supplier/Subcontractor considered technically acceptable (i.e., methods, materials, quantities, and delivery schedule are fair and reasonable for the		(b)(5)



PROPRIETARY AND CONFIDENTIAL

Pre-Award Technical Evaluation

Subcontract/P.O. No./MR No.: 24590-CM-SRA-AYFP-00001

CCN No: 255029

Supplier/Subcontractor: Performance Contracting, Inc. d/b/a PCI Promatec

N. ACCEPTABILITY		Yes	No
scope of the work)?			
(b)(5) identify whether the deficiencies have the ability to be resolved or not resolved.			
Summary(as needed):			
(b)(5)			

SIGNATURES				
	Title	Name	Signature	Date
Prepared by:	STR	W. D. Lowman		1/22/13 4/13/13
Reviewed by:	Subcontract Coordinator	T. A. Davin		1/23/13
Reviewed by:	Fire Protection ARI	Bennett Johnson		1/23/13
Approved by:	DPEM	Chris Musick		1/27/13

PROPRIETARY AND CONFIDENTIAL

Brown, Peter

From: Carlin, Lisa
Sent: Tuesday, August 21, 2012 12:50 PM
To: Brown, Peter
Subject: FW: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

fyi

Thank you,

Lisa Carlin

Bechtel National, Inc.
Subcontract Formation Specialist
Waste Treatment Plant Project (WTP)
(509) 371-2078 phone
(509) 371-2286 fax

From: McPherson, Gerald
Sent: Tuesday, August 21, 2012 12:49 PM
To: Carlin, Lisa
Subject: RE: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Lisa--

I have reviewed Performance Contracting, INC. OSHA form 301 log submittals. (b)(5)

(b)(5)

Regards,

Gerald

Gerald E. McPherson, CSP
Senior Safety & Health Lead
Start-Up, Area Operations and Maintenance
Subcontractor Safety
Bechtel National, Inc.
RPT--Waste Treatment Plant
Office: (509) 373-8283
Cell: (b)(6)
gemcpher@bechtel.com

From: McPherson, Gerald
Sent: Monday, August 13, 2012 4:59 PM
To: Carlin, Lisa
Subject: RE: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Lisa:

Please note the status of the 3 bidders as follows:

(b)(3):41 (1) (b)(5)

U.S.C 253,

(b)(3)

Performance Contracting Inc., dba PCI Promatec

Exceptions Number Taken	COMMERCIAL EXCEPTIONS	BNI Comment	OFFEROR Response
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Assumptions Number of Bids	Assumptions	BNI Comment	OFFEROR Response
1	W-1 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA
2	W-2 As a subcontractor to BNI, PCI (b)(3):41 U.S.C 253,(b)(4)		NA
3	W-3 (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)
4	W-4 (b)(3):41 U.S.C 253,(b)(4)		NA
5	W-5 (b)(3):41 U.S.C 253,(b)(4)		NA

Performance Contracting Inc., dba PCI Promatec

6	W-6	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
7	W-7	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
8	W-8	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	(b)(3):41 U.S.C 253,(b)(4)	C
(b)(3):41 U.S.C 253,(b)(4)	W-9	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)	Agree	C
10	W-10	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
11	W-11	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
12	W-12 ENR	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
13	W-13	This proposal is based on (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
14	W-14	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
15	W-15	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C
16	W-16 ENR	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	Agree	C
17	W-17	(b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	C

18	W-18 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl
19	W-19 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl
20	W-20 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	(b)(3):41 U.S.C 253,(b)(4)	cl
21	W-21 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl
22	W-22 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	Agree	cl
23	W-23 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl
24	W-24 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl
25	W-25 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	cl

Performance Contracting Inc., dba PCI Promatec

26	W-26 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C	(b)(5)	NA	C
27	W-27 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
28	W-28 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
29	W-29 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
30	W-30 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
31	W-31 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
32	W-32 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.		Agres	C
33	W-33 The PCI (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C
34	W-34 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4) (4)		NA	C
35	W-35 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	C

36	W-36 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	CI
37	W-37 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	CI
38	W-38 PCI (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	CI
39	W-39 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	CI
40	W-40 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	CI
41	W-41 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	CI
42	W-42 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	CI
43	W-43 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	CI
44	W-44 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.		(b)(3):41 U.S.C 253,(b)(4)	CI
45	W-45 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,		NA	CI

45	W-48 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	(b)(3):41 U.S.C 253,(b)(4)
47	W-47 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)
48	W-48 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)
(b)(3):41 U.S.C 253,(b)(4)	W-49 (b)(3):41 U.S.C 25		Agree
50	W-50 Per BNI, (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA
51	W-51 PCI has (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA

52	W-52 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	See assumption 54
53	W-53 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		See assumption 54
54	W-54 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)
55	W-55 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA
56	W-56 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)
57	W-57 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree with the same assumption we made on #15
58	W1-1 PCI (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA
59	W1-2 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA
60	W1-3 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA

Form P - Exceptions Commercial - Exceptions Taken	COMMERCIAL EXCEPTIONS	BNI Comment	OFFEROR Response	BNI Status (Open, Closed, Unresponsive)
---	-----------------------	-------------	------------------	---

Form W - Assumptions and Conditions of Bid	Assumptions	BNI Comment	OFFEROR Response	Status
1	W-1 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	Closed
2	W-2 As a subcontractor to BNI, PC: (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	Closed
3	W-3 (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	Closed W/DL 1/16/13
4	W-4 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
5	W-5 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

6	W-6 (b)(3)-41 U.S.C 253 (b)(4)	(b)(5)	NA	Closed
7	W-7 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
8	W-8 (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4),(b)(5)	Closed WDL 1/16/13
9	W-9 (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Closed WDL 1/16/13
10	W-10 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
11	W-11 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
12	W-12 BN: (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
13	W-13 This proposal is based on (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
14	W-14 (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
15	W-15 (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.		NA	Closed
16	W-16 PG: (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Open
17	W-17 (b)(3)-41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

18	W-18 (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	Closed
19	W-19 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
20	W-20 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	(b)(5) Item Closed WDL 1/15/13
21	W-21 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
22	W-22 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Closed WDL 1/16/13
23	W-23 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
24	W-24 BN (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
25	W-25 (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

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(b)(3):41 U.S.C 253,(b)(4)

PROPRIETARY AND CONFIDENTIAL

26	W-26 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 25	(b)(5)	NA	Closed
27	W-27 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
28	W-28 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
29	W-29 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
30	W-30 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
31	W-31 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
32	W-32 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Closed WOL 1/16/18
33	W-33 The PCI (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
34	W-34 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
35	W-35 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

(b)(3):41 U.S.C 253,(b)(4)

36	W-36 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	NA	Closed
37	W-37 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
38	W-38 PCI (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U		NA	Closed
39	W-39 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Closed W/Dt 1/16/13
40	W-40 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agree	Closed W/Dt 1/16/13
41	W-41 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
42	W-42 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
43	W-43 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
44	W-44 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.		(b)(3):41 U.S.C 253,(b)(4)	Completed air to service air. Closed W/Dt 1/16/13
45	W-45 (b)(3):41 U.S.C 253 (b)(4) [redacted]		NA	Closed

PROPRIETARY AND CONFIDENTIAL

(b)(3):41 U.S.C
253,(b)(4)

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6

46	W-46 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	(b)(3):41 U.S.C 253,(b)(4)	"Small area" can be worked out during coordination Closed WDL 1/16/13
47	W-47 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	Closed WDL 1/16/13
48	W-48 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	"Small area" can be worked out during coordination Closed WDL 1/16/13
49	W-49 (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253		Agree	Closed WDL 1/16/13
50	W-50 Per RNN (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
51	W-51 PCI (b)(3):41 U.S.C 253 (b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

PROPRIETARY AND CONFIDENTIAL

(b)(3):41 U.S.C 253.(b)(4)

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52	W-52 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)	(b)(5)	See assumption 54	Closed WDL 1/16/13
53	W-53 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		See assumption 54	Closed WDL 1/16/13
54	W-54 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	Closed WDL 1/16/13
55	W-55 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
56	W-56 PCI (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		(b)(3):41 U.S.C 253,(b)(4)	Closed WDL 1/16/13
57	W-57 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		Agrees with the same assumption was made on #15	Closed WDL 1/16/13
58	W-58 PCI (b)(3):41 U.S.C 253,(b)(4) (b)(3):		NA	Closed
59	W-59 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed
60	W-60 (b)(3):41 U.S.C 253,(b)(4) (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

41	W1-4 (b)(3):41 U.S.C 253 (b)(4)	(b)(5)	NA	Closed
42	W1-5 PCI (b)(3):41 U.S.C 253,(b)(4)		NA	Closed

(b)(3):41 U.S.C 253.(b)(4)

Additional BBS Submittal Comments Form R - Construction Plant and Equipment List	BNI Comment	OFFEROR Response	Status
Proposed Project Organization Chart and Resumes	(b)(5)	Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Resumes		Provide missing information	Closed WDI 1/16/13
Form D-1 Work Execution Plan		Coordinate and correct information.	Closed WDI 1/16/13
Form D-1 Work Execution Plan		Coordinate and correct information to indicate (b)(5)	Closed WDI 1/16/13

PROPRIETARY AND CONFIDENTIAL

Carlin, Lisa

From: Bennett, Gregory
ent: Wednesday, August 01, 2012 7:32 AM
To: Swanson, Kenneth
Cc: WTP Supplier Qualification; WTP Procurement - QA_PE Supplier Transmittals; Cuevas, Luis; Brown, Peter; Carlin, Lisa
Subject: CCN 250349 - PCI-PROMATEC - QAM REVIEW
Attachments: 250349 PCI-PROMATEC CM QAM RVW MEMO.pdf

Subject: QUALITY ASSURANCE CM PROGRAM REVIEW FOR PCI - PROMATEC

PLEASE DO NOT TRANSMIT TO SUPPLIER



250349
PROMATEC CM QAM I

Thanks,

Greg Bennett

Senior Quality Assurance Engineer
Supplier Qualification
(509) 371-2230
glbennet@bechtel.com
HF.02.S359 MS 13-A
Bechtel National Inc. (WTP)
Richland, WA



Memorandum

To: Ken Swanson, Subcontracts **Date:** July 31, 2012
From: Michael S. Cochrane, MS13-A **CCN:** 250349
Ph: 371-2912
Fax: 371-5866
Subject: MEMO TO SUBCONTRACTS - QUALITY ASSURANCE CM PROGRAM
REVIEW FOR PCI - PROMATEC

QUALITY ASSURANCE CM PROGRAM REVIEW FOR PCI - PROMATEC

The CM Quality Assurance (QA) program for PCI - Promatec, "Uncontrolled," "Quality Assurance Program," Revision F, dated June 20, 2003, was reviewed for compliance with DOE 414.1C, "Manufacturing (Design/Build), including Manufacture or Design by Sub-tier Suppliers."

This review is a preliminary step in determining that this Supplier's documented CM quality assurance program (b)(5) This memorandum does not (b)(5) of the Supplier's quality assurance program. Qualification of the quality program will be determined through a CM quality assurance audit of the implementation of the program.

The QA program is (b)(5)

Please reference the Program Matrix (attached) for specific details.

If you have any questions, please contact Greg Bennett at (509) 371-2230 or Patty Talmage at (509) 371-2923.

Very truly yours,



Michael S. Cochrane
Supplier Qualification Manager
Quality and Performance Assurance Department

GB/glb

- Attachments:
- 1) Program Matrix
 - 2) NQA-1-2000 Quality Assurance Manual Review Checklist
(Internal Only)
 - 3) Supplier Quality Assurance Program Action Request, dated July
30, 2012 **(Internal Only)**

Distribution:

Name	Attachments	Dept./Title	Mail Stop
Bennett, G. L.	<input checked="" type="checkbox"/>	Supplier Qualification	MS13-A
Cochrane, M. S.	<input checked="" type="checkbox"/>	Supplier Qualification Mgr.	MS13-A
PADC	<input checked="" type="checkbox"/>	O&AS	MS19-A
Talmage, P. A.	<input checked="" type="checkbox"/>	Supplier Qualification	MS13-A
WTP ESL Administrator	<input checked="" type="checkbox"/>	Q&PA	MS13-A
WTP Supplier Qualification	<input checked="" type="checkbox"/>	Q&PA	MS13-A

CM Program Compliance Matrix, PCI-POMATEC

Elements		GAM Results
1	Program	(b)(5)
2	Personnel Training & Qualification	
3	Quality Improvement	
4	Documents and Records	
5	Work Processes	
6	Design	
7	Procurement	
8	Inspections and Acceptance Testing	
9	Management Assessment	
10	Independent Assessment	

Results: **S** = Satisfactory **U** = Unsatisfactory **N/A** = Not Applicable

Supplier Documents:

- *Quality Assurance Manual, Revision F, dated June 6, 2003*

Carlin, Lisa

From: Mcpherson, Gerald
Sent: Tuesday, August 21, 2012 12:49 PM
To: Carlin, Lisa
Subject: RE: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Lisa--

I have reviewed Performance Contracting, INC. OSHA form 301 log submittals- (b)(5) (b)(5)
(b)(5)

Regards,

Gerald

Gerald E. McPherson, CSP
Senior Safety & Health Lead
Start-Up, Area Operations and Maintenance
Subcontractor Safety
Bechtel National, Inc.
RPT--Waste Treatment Plant
Office: (509) 373-8283
Cell: (b)(6)
gemcpher@bechtel.com

From: Mcpherson, Gerald
Sent: Monday, August 13, 2012 4:59 PM
To: Carlin, Lisa
Subject: RE: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Lisa:

Please note the status of the 3 bidders as follows:

(b)(3):41 (1.) (b)(5)
U.S.C 253,
(b)(5)

(2.) **Performance Contracting, Inc.** (b)(5)
(b)(5)
(b)(5)

(3.) (b)(3):41 U.S.C 253,(b)(5) (b)(5)

Questions--give me a call at (b)(6)

Gerald E. McPherson, CSP
Senior Safety & Health Lead
Start-Up, Area Operations and Maintenance
Subcontractor Safety
Bechtel National, Inc.
RPT--Waste Treatment Plant
Office: (509) 373-8283
Cell: (b)(6)
gemcpher@bechtel.com

From: Carlin, Lisa
Sent: Tuesday, July 24, 2012 2:13 PM
To: Mcpherson, Gerald
Cc: Brown, Peter; Lowman, William
Subject: SENSITIVE: SAFETY EVALUATION FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS
Importance: High

Thank you,
Lisa Carlin

Bechtel National, Inc.
Subcontract Formation Specialist
Waste Treatment Plant Project (WTP)
(509) 371-2078 phone
(509) 371-2286 fax

From: Mcpherson, Gerald
Sent: Thursday, June 21, 2012 2:54 PM
To: Carlin, Lisa
Subject: RE: SAFETY EVALUATION FOR RFP DOCUMENTS SUBMITTED FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Gerald,

Please complete your Safety evaluation input for the companies below. Additional information as requested is included.

Thank you,
Lisa Carlin
Formation Specialist
371-2078

June 20, 2012

RE: SAFETY EVALUATION FOR RFP DOCUMENTS SUBMITTED FOR RFP 24590-CM-SRA-AYFP-00001, LBL PENETRATIONS

Lisa--please note the following;

(b)(3): 41. [redacted] (b)(5)
U.S.C. 856
(b)(5)

(b)(5)

(2.) Performance Contracting, Inc (b)(5)

(b)(5)

(b)(5)

(3.) (b)(3):41 U.S.C 253,(b)(5)

If you have questions--give me a call on my cell--

Regards,

Gerald

Gerald E. McPherson, CSP
Senior Safety & Health Lead
Start-Up, Area Operations and Maintenance
Subcontractor Safety
Bechtel National, Inc.
RPT--Waste Treatment Plant
Office: (509) 373-8283
Cell: (b)(6)
gemcpher@bechtel.com

Carlin, Lisa

From: Carlin, Lisa
Sent: Friday, June 29, 2012 3:28 PM
To: 'randy.brown@pcg.com'
Cc: 'justin.roy@pcg.com'
Subject: Request for additional information: 24590-CM-SRA-AYFP-00001, LBL Penetration Seals

Importance: High
Sensitivity: Confidential

Attachments: PCI Promatec Clarifications Requested.xls

Please find and respond to all requested information in the attached file by 2:00 pm PST on Monday, July 9, 2012 and plan to meet with BNI on Wednesday, July 18, 2012 from 12:00-4:00 pm PST at the WTP Richland, WA Project Office to discuss further.

Please advise BNI if these clarifications will impact PCI Promatec proposed pricing but do not submit new pricing at this time.

Please do revise all other components of the proposal forms which have been noted as incomplete or requiring additional data and re-submit with your response by 2:00 pm PST on Monday, July 9, 2012.



PCI Promatec
Clarifications Re...

Thank you,

Lisa Carlin

Bechtel National, Inc.
Subcontract Formation Specialist
Waste Treatment Plant Project (WTP)
(509) 371-2078 phone
(509) 371-2286 fax

Performance Contracting Inc., dba PCI Promatec		BNI Comments
(b)(3):41 U.S.C 253,(b)(4)		(b)(5)
1		
2		
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Assumptions		
9	W1 (b)(3):41 U.S.C 253,(b)(4)	
10	W2 Bechtel (b)(3):41 U.S.C 253,(b)(4)	
11	W3 (b)(3):41 U.S.C 253,(b)(4)	
12	W4 (b)(3):41 U.S.C 253,(b)(4)	
13	W5 (b)(3):41 U.S.C 253,(b)(4)	
14	W6 (b)(3):41 U.S.C 253,(b)(4)	
15	W7 (b)(3):41 U.S.C 253,(b)(4)	
16	W8 (b)(3):41 U.S.C 253,(b)(4)	
17	W9 (b)(3):41 U.S.C 253,(b)(4)	
(b)(3):41 U.S.C 253,(b)(4)	W10 This category is for (b)(3):	
18	(b)(3):41 U.S.C 253,(b)(4)	
19	W11 (b)(3):41 U.S.C 253,(b)(4)	
20		(b)(5)
21		
Commercial Exceptions - Form P		
22	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)
23		
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27		

Performance Contracting Inc., dba PCI Promatec		BNI Comments
(b)(3):41 U.S.C 253,(b)(4)	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)
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Commercial Assumptions - Form W		
	(b)(3):41 U.S.C 253,(b)(4)	
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	Performance Contracting Inc., dba PCI Promatec	BNI Comments
(b)(3):41 U.S.C. 253(b)(4)	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)
52		
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	Performance Contracting Inc., dba PCI Promatec	BNI Comments
(b)(3):41 U.S.C 253,(b)(4)		
69	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)
70		
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	Bid Clarification	
76	(b)(3):41 U.S.C 253,(b)(4)	
	GC-21 Cooperation with Other	
77	(b)(3):41 U.S.C 253,(b)(4)	(b)(5)
	GC-23 Responsibility for Work Security and Property	
78	(b)(3):41 U.S.C 253,(b)(4)	
	GC-30 Expediting	
79	(b)(3):41 U.S.C 253,(b)(4)	
	GC-31 Excusable Delays and GC-32 Changes	
80	(b)(3):41 U.S.C 253,(b)(4)	
	GC-35 Backcharges	
81	(b)(3):41 U.S.C 253,(b)(4)	
	GC-36 Indemnity	
82	(b)(3):41 U.S.C 253,(b)(4)	
	SC-4 Insurance	
83	(b)(3):41 U.S.C 253,(b)(4)	

	Performance Contracting Inc., dba PCI Promatec	BNI Comments
(b)(3):41 U.S.C 253(b)(4)	SC-10 Commencement, Progress and Completion of the Work	
84	(b)(3):41 U.S.C 253(b)(4)	
85	SC-16 Invoicing and Payment	
86	(b)(3):41 U.S.C 253(b)(4)	
87	SC-17 Pricing of Adjustments	
88	SC-22 Title and Risk of Loss	
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(b)(5)

Performance Contracting Inc., dba PCI Promatec		BNI Comments
(b)(3):41 U.S.C 253(b)(4)		(b)(5)
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	Technical Assumptions, Form W-1	
107	(b)(3):41 U.S.C 253,(b)(4)	
108		
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**HANFORD TANK WASTE TREATMENT AND
IMMOBILIZATION PLANT**

**ENGINEER, PROCURE, CONSTRUCT (EPC)
SUBCONTRACT**

EXHIBIT "C" – QUANTITIES, PRICING, AND DATA

24590-CM-FC1-AYFP-00001



FORM A - SCHEDULE OF QUANTITIES AND PRICES

1.0 WORK TO BE PERFORMED

SUBCONTRACTOR shall supply all necessary labor, technical and professional services, vendor engineering, calculations with required Washington State Professional Engineering/Architectural stamps/seals, supervision, permanent materials and equipment (other than materials and equipment specified as furnished by CONTRACTOR), construction equipment, tools, supervision, inspection, testing, consumables and supplies, miscellaneous materials and incidentals, shipping, transportation and delivery, overhead and profit, and all other costs, whether direct or indirect, required to perform the Scope of Work as required by the Subcontract Documents.

2.0 PRICING

This is an Indefinite Delivery Indefinite Quantity Subcontract utilizing Fully Burdened Firm Fixed Unit Prices

2.1 FIRM FIXED PRICES

The Firm Fixed Prices quoted below are for Work performed in accordance with Subcontract Exhibit "A," General Conditions, Exhibit "B," Special Conditions, and Exhibit "D," Scope of Work and Technical Requirements. All prices shall remain firm and fixed for the duration of the Subcontract and are not subject to escalation for any cause. Payment of the Firm Fixed Price shall constitute full payment for the performance of the Work and covers all costs, whatever nature, incurred by SUBCONTRACTOR in accomplishing the Work in accordance with the provisions of the Subcontract.

The breakdown of the Firm Fixed Prices against pay items are detailed in Exhibit "C," Quantities, Pricing, and Data, Attachment 1. Any changes made against the pay items in Attachment 1 shall be made in accordance with Exhibit "A," General Conditions, Clause GC-14 - Changes.

2.2 TIME AND MATERIAL - LABOR HOUR RATE

Applicable to Pay Item's 2.1 – 2.7, 3.1 – 3.7, and 5.1 – 5.5 only.

The Labor Hour Rates provided in Exhibit "C," Quantities, Pricing, and Data, Attachment 1 are for Work performed in accordance with Subcontract Exhibit "A," General Conditions, Exhibit "B," Special Conditions, and Exhibit "D," Scope of Work and Technical Requirements. All prices in the Time and Material - Labor Hour Rate Schedules shall be firm and fixed during the period of performance of the Subcontract and are not subject to escalation for any cause with the exception of HSSA. All allowable hours billed for installation of penetration seals in an unproductive quantity release shall be according to the labor rates identified in pay items 3.1 through 3.7. All allowable costs billed for the Upfront Engineering Activities shall be according to the labor rates identified in pay items 5.1 through 5.5. Any material purchased to support time and material work shall be billed in accordance with pay item 4.1.

2.3 INDEFINITE DELIVERY INDEFINITE QUANTITY UTILIZING FULLY BURDENED FIRM FIXED UNIT PRICES

The Firm Fixed Unit Prices (UP) provided in Exhibit "C," Quantities, Pricing, and Data, Attachment 1 are for Work performed in accordance with Subcontract Exhibit "A," General Conditions, Exhibit "B," Special Conditions, and Exhibit "D," Scope of Work and Technical Requirements. All prices shall remain firm and fixed for the duration of the Subcontract and are not subject to escalation for any cause. Payment of the Firm Fixed Unit Prices shall constitute full payment for the performance of the Work and covers all costs, including but not limited to, design, engineering, material, labor, equipment, installation, direct and indirect costs, small tools, consumables, overhead, profit and all other costs required for completion of the Work. Payment also includes, but is not limited to the following basis for Safety compliance in the WTP Jobsite: Initial Construction Training, per worker: 2 hours (includes initial HGET exam), Initial Medical "Fitness for Duty" examination (completed on project by project subcontracted medical personnel), per worker:

All prices are fixed for the duration of the subcontract and are not subject to escalation for any cause, with the exception of adjustments due to an increase/decrease in the Hanford Site Stabilization Agreement, Appendix A Craft Rates as show on



FORM A - SCHEDULE OF QUANTITIES AND PRICES

the website; www.waste2glass.com. Payment of the Fully Burdened Firm Fixed Unit Prices shall constitute full payment for performance of the Work and covers all costs of whatever nature incurred by SUBCONTRACTOR in accomplishing the Work in accordance with the provisions of the subcontract. SUBCONTRACTOR shall include the appropriate cost codes in its payment certificates/invoice as provided by CONTRACTOR.

Any changes made against the pay items provided in Exhibit "C," Quantities, Pricing, and Data, Attachment 1 shall be made in accordance with Exhibit "A," General Conditions, Clause GC-14 - Changes.

3.0 QUANTITIES

Payment will be made for the actual quantities released and completed via the Work Release process and in accordance with the Subcontract requirements based on the unit prices established in the Fully Burdened Firm Fixed Unit Price Schedule (Schedule) provided in Exhibit "C." Quantities, Pricing, and Data, Attachment 1 as long as quantities are within the allowed ±20% per pay item. The quantities noted in the Schedule are approximations subject to variations within ±20% on each item and no claim shall be made for deficiency or over run, actual or relative. If the final quantity is in the ±20% range, the SUBCONTRACTOR or CONTRACTOR may request a price adjustment for the quantity outside of the range. Payment will be made for the actual quantities of each item incorporated in the Work and in accordance with the subcontract requirements based on the unit prices established in the Schedule as long as quantities are within the allowed ±20% variation. If the variation range(s) is ±20% an equitable adjustment will be negotiated pursuant to the General Condition titled "CHANGES".

Payment of the Total Subcontract Price shall constitute full payment for performance of the Work and covers all costs of whatever nature incurred by SUBCONTRACTOR in accomplishing the Work in accordance with the requirements of the subcontract.

SUBCONTRACTOR shall maintain all work in progress until it is accepted. SUBCONTRACTOR shall repair, rework or replace as necessary any work damaged or lost due to normal wear and tear, anticipated events, or conditions within its control. No separate payment shall be made for such maintenance costs which are deemed included in the original subcontract price. Any failure to maintain the Work shall be considered a defect in accordance with the General Condition titled "WARRANTY".

Upon completion of the scope of work identified on each work release, SUBCONTRACTOR will inform CONTRACTOR. CONTRACTOR will inspect the scope identified as completed and released previously via a work release and if acceptable will sign the applicable work release accordingly. This Work Release will then be submitted in the associated Quality Verification Report Package (QVRP) by the SUBCONTRACTOR to the CONTRACTOR. Approved QVRP indicates the work performed is accepted by CONTRACTOR.

4.0 DESIGN UNIT LABOR RATES FOR CHANGES

The following Design Unit Rates for changes shall only be used for "changes" under the subcontract.

These Design Unit Rates for Changes shall remain firm and fixed for the duration of the subcontract and are not subject to escalation for any cause whatsoever. These unit prices are all inclusive of direct and indirect costs and profit.

LABOR CLASSIFICATION	UNIT OF MEASURE	FULLY BURDENED FIRM, FIXED RATE
Manager	Hour	(b)(4)
Superintendent	Hour	
Fire Protection Engineer	Hour	
Engineer	Hour	
Safety Supervisor	Hour	
QA Manager	Hour	



FORM A - SCHEDULE OF QUANTITIES AND PRICES

LABOR CLASSIFICATION	UNIT OF MEASURE	FULLY BURDENED FIRM, FIXED RATE
QC Inspector	Hour	(b)(4)
Drafter	Hour	
Clerk	Hour	
Administrator	Hour	
Additional Engineers	Hour	
Additional QC Inspectors	Hour	

5.0 JOBSITE FIXED UNIT LABOR RATES FOR CHANGES

The following WTP Jobsite Fixed Unit Labor Rates for Changes shall only be used for "changes" under the Subcontract.

The WTP Jobsite Fixed Labor Rates for Changes shall be in accordance with the Hanford Site Stabilization Agreement (HSSA) (refer to Exhibit "H" of the subcontract). These rates will remain firm and fixed for the duration of the subcontract and are not subject to escalation for any cause, except that adjustments to wages, fringe, and benefits as required by the HSSA will be allowed. The unit prices shall be inclusive of all direct and indirect costs and profit or as otherwise indicated.

Labor Category	Burdened Rate (with production work)	Fully Burdened Rate (without production work)
Insulator Apprentice 1	(b)(4)	(b)(4)
Insulator Apprentice 2		
Insulator Apprentice 3		
Insulator Apprentice 4		
Insulator Journeyman		
Insulator Foreman		
Insulator General Foreman		

6.0 FIELD OFFICE STANDBY RATES

Measurement will be made on a whole day basis (no fractions), including all field office costs, indirect manual and non-manual labor, equipment, utilities, etc., and shall begin upon the first full day of standby.

Field Office Item Description	Daily Standby Rate
Manager	(b)(4)
Superintendent	
Fire Protection Engineer	
Engineer	
Safety Supervisor	
QA Manager	
QC Inspector	
Drafter	
Clerk	
Administrator	
Additional Engineers	
Additional QC Inspectors	



FORM A - SCHEDULE OF QUANTITIES AND PRICES

7.0 TRAVEL EXPENSE REIMBURSEMENT

No Additional travel is anticipated or included in this Subcontract.

8.0 REQUIRED SUBMITTALS

The following submittals are prerequisite to payment for mobilization where mobilization is a separate unit price pay item:

- SUBCONTRACTOR Authorized Representative letter (Exhibit "A," GC-2)
- EFT form (for direct deposit of invoice payments) (Exhibit "B," SC-16 and Attachment)
- Compliant Insurance Certificate (Exhibit "B," SC-2)
- Key Personnel Qualifications (Exhibit "B," SC-20)
- Subcontract Schedule (Exhibit "B," SC-10)
- Safety Program Letters of Acknowledgement; Zero Accident, ISMS, Safety and Health (Exhibit "G")
- Training records for personnel who will be performing Work on site (Exhibit "D," "G")
- Security Program (Exhibit "B," SC-13)
- Quality Assurance Program (Exhibit "B," SC-38)

9.0 METHOD OF MEASUREMENT AND PAYMENT

Pay Item No.	Pay Item Description and Basis of Payment
FIRM FIXED PRICE PAY ITEMS	
1.1	Mobilization: Lump Sum Amount. To be paid as a single lump sum for the full amount shown in Pay Item 1.1, after satisfactory completion of the following work: <ul style="list-style-type: none"> • Submittals of all submittals provided under "Required Submittals" above, including those requiring minimum Status Code 2 as returned after review by CONTRACTOR. • Establishment of temporary facilities (i.e. jobsite trailer), utilities, storage, and other laydown area requirements on the WTP Jobsite as required by the Subcontract. • Signatory to HSSA, security badging, and all other preparations complete for mobilizing labor and equipment to the WTP Jobsite for commencement of Work.
1.2	De-Mobilization and Clean-up: Lump Sum Amount. To be paid as a single lump sum for the full amount shown in Pay Item 1.2 after satisfactory completion of the following Work: <ul style="list-style-type: none"> • Removal of all SUBCONTRACTOR'S construction equipment, temporary facilities and utilities from SUBCONTRACTOR'S Laydown and Work areas on the WTP Jobsite. • Removal of all excess construction materials, as determined by CONTRACTOR • Final clean-up of SUBCONTRACTOR'S complete Laydown and Work areas • Demobilization of SUBCONTRACTOR'S Work crews and non-manual personnel • Verification that all security and/or access badges, of any kind, issued by CONTRACTOR or OWNER to the SUBCONTRACTOR and its lower tier suppliers and Subcontractor's personnel, have been returned or otherwise accounted for • Submittal of all Quality Verification records required by the Subcontract, unless instructed otherwise by CONTRACTOR • CONTRACTOR'S issuance of Final Acceptance of Work certificate, unless instructed otherwise by CONTRACTOR
1.3	Performance and Payment Bonds, actual cost of the bonds will be reimbursed at cost based on Surety's invoice as submitted by SUBCONTRACTOR
1.4	Engineering Judgment/Analysis SUBCONTRACTOR shall be paid monthly, for acceptable completion of the Work, as determined mutually under the terms of the Subcontract between SUBCONTRACTOR and CONTRACTOR.



FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
	<p>Each Firm Fixed Unit Price Pay Item listed includes, but is not limited to provision of all necessary labor, supervision, technical and administrative services, engineering, consumables, transportation, temporary facilities (unless indicated elsewhere in the Subcontract documents as supplied by CONTRACTOR), insurance, inspection, testing, documentation, delivery, overhead and profit, and all other costs, whether direct or indirect, required to provide engineering judgment for unique penetrations identified in the Scope of Work which CONTRACTOR agrees falls outside of the parameters of any UL configuration or design, and requires Engineering Judgment.</p>
1.5	<p>Test</p> <p>SUBCONTRACTOR shall be paid monthly, for acceptable completion of the Work, as determined mutually under the terms of the Subcontract between SUBCONTRACTOR and CONTRACTOR. Each Firm Fixed Unit Price Pay Item listed includes but is not limited to provision of all necessary labor, supervision, technical and administrative services, engineering, consumables, transportation, temporary facilities (unless indicated elsewhere in the Subcontract documents as supplied by CONTRACTOR), insurance, inspection, testing, documentation, delivery, overhead and profit, and all other costs, whether direct or indirect, required to provide engineering evaluation / testing for unique penetrations identified in the Scope of Work which CONTRACTOR agrees falls outside of the parameters of any other UL configuration or design and requires Laboratory Testing.</p>
TIME AND MATERIAL – LABOR HOUR RATE PAY ITEMS	
2.1-2.7, 3.1-3.7, 4.1, 5.1- 5.5	<p>SUBCONTRACTOR shall be paid in accordance with Exhibit "B," Special Conditions, Clause titled "MEASUREMENT AND PAYMENT" and with this clause.</p> <p>SUBCONTRACTOR shall submit adequate backup documentation with its invoice indicating employee name, Work task performed, and hours charged.</p> <p>SUBCONTRACTOR is required to accumulate costs in an organized manner, such as through a system of accounts (job costing system). SUBCONTRACTOR is required to submit time cards signed by the SUBCONTRACTOR'S employee and approved by his/her supervisor with a statement attesting to the correctness, accuracy and reasonableness of time cards with each invoice. This invoice must indicate tasks performed, deliverables, and/or submittals worked on during the invoice period.</p> <p>CONTRACTOR will pay SUBCONTRACTOR in accordance with the subcontract payment terms upon the submission and approval of invoices:</p> <p>(a) Hourly rate.</p> <p>(1) Hourly rate means the rate(s) prescribed in the subcontract for payment for labor that meets the labor category qualifications of a labor category specified in the subcontract that are—</p> <ul style="list-style-type: none">(i) Performed by SUBCONTRACTOR ;(ii) Performed by SUBCONTRACTOR'S lower-tier subcontractors; or(iii) Transferred between divisions, subsidiaries, or affiliates of SUBCONTRACTOR under a common control. <p>(2) The amounts shall be computed by multiplying the appropriate hourly rates prescribed in the Schedule of Quantities and Prices (Schedule) by the number of direct labor hours performed.</p> <p>(3) The hourly rates shall be paid for all labor performed on the subcontract that meets the labor qualifications specified in the subcontract. Labor hours incurred to perform tasks for which labor qualifications were specified in the subcontract will not be paid to the extent the work is performed by employees that do not meet the qualifications specified</p>



FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
	<p>in the subcontract, unless specifically authorized by CONTRACTOR.</p> <p>(4) The hourly rates shall include wages, indirect costs, general and administrative expense, and profit. Fractional parts of an hour shall be payable on a prorated basis.</p> <p>(5) The SUBCONTRACTOR shall substantiate invoices (including any lower-subcontractor hours reimbursed at the hourly rate in the schedule) by evidence of actual payment and by:</p> <ul style="list-style-type: none">(i) Individual daily job timekeeping records;(ii) Records that verify the employees meet the qualifications for the labor categories specified in the subcontract; or(iii) Other substantiation approved by CONTRACTOR. <p>(6) Unless the Schedule prescribes otherwise, the hourly rates in the Schedule shall not be varied by virtue of the SUBCONTRACTOR having performed work on an overtime basis. If no overtime rates are provided in the Schedule and overtime work is approved in advance by CONTRACTOR, overtime rates shall be negotiated. Failure to agree upon these overtime rates shall be treated as a dispute under the Disputes clause of this subcontract. If the Schedule provides rates for overtime, the premium portion of those rates will be reimbursable only to the extent the overtime is approved by CONTRACTOR.</p> <p>(b) Materials/Equipment.</p> <p>(1) or the purposes of this clause—</p> <ul style="list-style-type: none">(i) Direct materials/Equipment means those materials that enter directly into the end product, or that are used or consumed directly in connection with the furnishing of the end product or service.(ii) Materials/Equipment mean—<ul style="list-style-type: none">(A) Direct materials/Equipment, including supplies transferred between divisions, subsidiaries, or affiliates of the SUBCONTRACTOR under a common control;(B) Subcontracts for supplies and incidental services for which there is not a labor category specified in the subcontract;(C) Other direct costs (e.g., incidental services for which there is not a labor category specified in the subcontract, travel, computer usage charges, etc.); and(D) Applicable indirect costs. <p>(2) If the SUBCONTRACTOR furnishes its own materials/equipment that meet the definition of a commercial item at Subpart <u>2.101</u> of the Federal Acquisition Regulation (FAR), the price to be paid for such materials shall not exceed the SUBCONTRACTOR'S established catalog or market price, adjusted to reflect the—</p> <ul style="list-style-type: none">(i) Quantities being acquired; and(ii) Actual cost of any modifications necessary because of subcontract requirements. <p>(3) Payment for materials/equipment is subject to the Allowable Cost and Payment clause of this subcontract. CONTRACTOR will determine allowable costs of materials in accordance with <u>Subpart 31.2</u> of the FAR in effect on the date of this subcontract.</p>



FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
	<p>(4) The SUBCONTRACTOR may include allocable indirect costs and other direct costs to the extent they are:</p> <ul style="list-style-type: none"> (i) Comprised only of costs that are clearly excluded from the hourly rate; (ii) Allocated in accordance with the SUBCONTRACTOR'S written or established accounting practices; and (iii) Indirect costs are not applied to subcontracts that are paid at the hourly rates. <p>(5) To the extent able, the SUBCONTRACTOR shall:</p> <ul style="list-style-type: none"> (i) Obtain materials/equipment at the most advantageous prices available with due regard to securing prompt delivery of satisfactory materials and equipment; and (ii) Take all cash and trade discounts, rebates, allowances, credits, salvage, commissions, and other benefits. When unable to take advantage of the benefits, the SUBCONTRACTOR shall promptly notify CONTRACTOR and give the reasons. The SUBCONTRACTOR shall give credit to the CONTRACTOR for cash and trade discounts, rebates, scrap, commissions, and other amounts that have accrued to the benefit of the SUBCONTRACTOR, or would have accrued except for the fault or neglect of the SUBCONTRACTOR. The SUBCONTRACTOR shall not deduct from gross costs the benefits lost without fault or neglect on the part of the SUBCONTRACTOR, or lost through fault of the CONTRACTOR. <p>CONTRACTOR will not pay profit or fee to SUBCONTRACTOR on materials/equipment.</p>

INDEFINITE DELIVERY INDEFINITE QUANTITY UTILIZING FIRM FIXED UNIT PRICES PAY ITEMS

6.1-	The following description shall apply to payment of each firm fixed unit price
6.102,	Part 1: SUBCONTRACTOR shall be paid monthly for progress of the Work completed acceptably as
7.1-	determined mutually under the terms of the Subcontract between SUBCONTRACTOR and
7.102,	CONTRACTOR, said Work consisting of supply of all necessary labor, technical and professional
8.1-	services, detail engineering, calculations with Professional Engineering Seal, supervision, permanent
8.102,	materials and equipment, (other than materials and equipment specified as furnished by
9.1-	CONTRACTOR), construction equipment, scaffolding tools, inspection testing, consumables and
9.102,	supplies, miscellaneous materials and incidentals, shipping, transportation and delivery, overhead
10.1-	and profit, and all other labor, material and equipment, whether direct or indirect, required to complete
10.102	the installation of penetration seals work for the Low Activity Waste (LAW) Vitrification Building, and
	Laboratory (LAB) in accordance with the Scope of Work, specifications and standards, and the terms and conditions of the Subcontract Documents.
	Part 2: Included with SUBCONTRACT'S fully burdened fixed unit prices shall include the following basis for Safety Compliance in the WTP Jobsite:
	Initial Construction training, per worker, 26 hours (Includes HGET exam)
	Initial Medical "Fitness for Duty" examination (currently by MedCor) per worker, 1 hour
	Yearly retraining for HGET Procedure revisions per worker 20 hours
	Annual Medical Examination per worker 1 hour
	INSTALLATION OF PENETRATION SEALS: NTE total for Firm Fixed Unit Price amount. To be paid utilizing monthly progress payments for quantities completed against specific system codes and line items to include but not limited to:
	Procurement of materials
	Installation of Penetration seal to include boot, grout, sleeve, etc. as appropriate
	Includes all labor, materials, overhead, facilities, and equipment required to perform the Work.



FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
	Project management and non-manual support staff. Activities to include Project planning, Scheduling, Overall project supervision, Cost control, coordination, subcontract management and any other level of effort activities directly related to this Work.
	Submittal of and CONTRACTOR approval of all required Quality Verification Review Packages (QVRP's)
	Inspection Test Program and Inspection Reports
	Installation Procedures
	Quality Control Manual and all implementing procedures.

Assumptions

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FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
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FORM A - SCHEDULE OF QUANTITIES AND PRICES

Pay Item No.	Pay Item Description and Basis of Payment
	(b)(4)
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10.0 PERFORMANCE AND PAYMENT SECURITIES

SUBCONTRACTOR to be reimbursed for Performance Bond and Payment Bond separately from the Lump Sum and at cost when supported by the surety's invoice.

11.0 TOTAL SUBCONTRACT VALUE AND FUNDING LIMITATIONS

The total not-to-exceed value of this Subcontract is \$14,020,249.56. The total payments under this Subcontract shall not exceed the not-to-exceed value of this Subcontract without a written Amendment to the subcontract.

12.0 ALLOWABLE COSTS - FOR USE WITH TIME AND MATERIAL LABOR HOURS ONLY

All parties agree that the actual value of this Subcontract for quantities associated with unproductive installation paid per the Time and Material Clause, will be calculated on the basis of labor hours actually worked and travel costs actually incurred and allowable in accordance with the Subcontract Documents and the Work stipulated in the Scope of Work.

13.0 ATTACHMENTS

Attachment 1, Price Schedule

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

FIRM FIXED PRICE SCHEDULE

ITEM NO	DESCRIPTION	UNIT	QTY	UNIT RATE	FIRM FIXED PRICE
GENERAL					
A.1.1	Mobilization	Lot	1	(b)(4)	
A.1.2	De-Mobilization	Lot	1		
A.1.3	Performance and Payment Bonds	Lot	1		
A.1.4	Engineering Judgement	EA	20		
A.1.5	Test	EA	1		
SUBTOTAL					(b)(4)

TIME AND MATERIAL - LABOR HOUR RATE

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
LABOR HOUR RATE SCHEDULE (WITH PRODUCTION WORK)					
A.2.1	insulator Apprentice 1	HR	TBD	(b)(4)	TBD
A.2.2	insulator Apprentice 2	HR	TBD		TBD
A.2.3	insulator Apprentice 3	HR	TBD		TBD
A.2.4	insulator Apprentice 4	HR	TBD		TBD
A.2.5	insulator Journeyman	HR	TBD		TBD
A.2.6	insulator Foreman	HR	TBD		TBD
A.2.7	insulator General Foreman	HR	TBD		TBD
SUBTOTAL					\$0.00

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
LABOR HOUR RATE SCHEDULE (UNPRODUCTIVE QUANTITY RELEASES)					
A.3.1	insulator Apprentice 1	HR	TBD	(b)(4)	TBD
A.3.2	insulator Apprentice 2	HR	TBD		TBD
A.3.3	insulator Apprentice 3	HR	TBD		TBD
A.3.4	insulator Apprentice 4	HR	TBD		TBD
A.3.5	insulator Journeyman	HR	TBD		TBD
A.3.6	insulator Foreman	HR	TBD		TBD
A.3.7	insulator General Foreman	HR	TBD		TBD
SUBTOTAL					\$0.00

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
MATERIAL SCHEDULE (APPLICABLE TO MATERIAL TO SUPPORT TIME AND MATERIAL ONLY)					
A.4.1	Material Handling Rate	EA	TBD	NA	(b)(4)
SUBTOTAL					(b)(4)

TIME AND MATERIAL - UPFRONT ENGINEERING ACTIVITIES

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
LABOR HOUR RATE SCHEDULE - UPFRONT ENGINEERING ACTIVITIES					
A.5.1	Fire Protection Engineer	MO	2	(b)(4)	
A.5.2	Project Manager	MO	3		
A.5.3	Field Engineer	MO	3		
A.5.4	QC Manager	MO	3		
A.5.5	Superintendent	MO	1		
SUBTOTAL					(b)(4)

INDEFINITE DELIVERY INDEFINITE QUANTITY UTILIZING FULLY BURDENED FIRM FIXED UNIT PRICES

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
CONCRETE WALL/CEILING					
B.1.1	Conduit, Single	EA	12	(b)(4)	
B.1.2	Conduit, Single - grout	EA	1		
B.1.3	Conduit - Group (2-10)	EA	156		
B.1.4	Conduit - Group (2-10) - grout	EA	1		
B.1.5	Conduit - Group >10	EA	0		
B.1.6	Conduit - Group >10 - grout	EA	0		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

B.1.7	Duct-Rect, 0"-80" L in - Single	EA	11	(b)(4)
B.1.8	Duct-Rect >80"-160" L in - Single	EA	9	
B.1.9	Duct-Rect >160" L in - Single	EA	2	
B.1.10	Duct-Rnd 0"-20" Diam. - Single	EA	3	
B.1.11	Duct-Rnd >20"-40" - Single	EA	0	
B.1.12	Duct-Rnd >40" - Single	EA	0	
B.1.13	Duct Group	EA	1	
B.1.14	Duct-Rect, 0"-80" L in - Single - Movement	EA	0	
B.1.15	Duct-Rect, >80"-160" L in - Single - Movement	EA	0	
B.1.16	Duct-Rect, >160" L in - Single - Movement	EA	0	
B.1.17	Duct-Rnd 0"-20" - Single - Movement	EA	0	
B.1.18	Duct-Rnd >20"-40" - Single - Movement	EA	0	
B.1.19	Duct-Rnd >40" - Single - Movement	EA	0	
B.1.20	Duct Group Movement	EA	0	
B.1.21	Bus, Single	EA	2	
B.1.22	Bus, Group	EA	0	
B.1.23	Pipe, 0"-6" Diam - Single	EA	112	
B.1.24	Pipe, 0"-6" Diam - Single - grout	EA	1	
B.1.25	Pipe, >6"-12" Diam - Single	EA	3	
B.1.26	Pipe, >6"-12" Diam - Single - grout	EA	1	
B.1.27	Pipe, >12" Diam - Single	EA	0	
B.1.28	Pipe, >12" Diam - Single - grout	EA	1	
B.1.29	Pipe, 0"-6" Diam - Single - Movement	EA	31	
B.1.30	Pipe, 0"-6" Diam - Single - Movement - grout	EA	1	
B.1.31	Pipe, >6"-12" Diam - Single - Movement	EA	1	
B.1.32	Pipe, >6"-12" Diam - Single - Movement - grout	EA	1	
B.1.33	Pipe, >12" Diam - Single - Movement	EA	0	
B.1.34	Pipe, >12" Diam - Single - Movement - grout	EA	1	
B.1.35	Pipe/Tubing, All 0"-6" - Group (2-5)	EA	1	
B.1.36	Pipe/Tubing, All 0"-6" - Group (2-5) - grout	EA	1	
B.1.37	Pipe/Tubing, All 0"-6" - Group (6-10)	EA	1	
B.1.38	Pipe/Tubing, All 0"-6" - Group (6-10) - grout	EA	1	
B.1.39	Pipe/Tubing, All 0"-6" - Group (>10)	EA	0	
B.1.40	Pipe/Tubing, All 0"-6" - Group (>10) - grout	EA	0	
B.1.41	Pipe/Tubing, Any >6" - Group (2-5)	EA	0	
B.1.42	Pipe/Tubing, Any >6" - Group (2-5) - grout	EA	0	
B.1.43	Pipe/Tubing, Any >6" - Group (6-10)	EA	0	
B.1.44	Pipe/Tubing, Any >6" - Group (6-10) - grout	EA	0	
B.1.45	Pipe/Tubing, Any >6" - Group (>10)	EA	0	
B.1.46	Pipe/Tubing, Any >6" - Group (>10) - grout	EA	0	
B.1.47	Pipe/Tubing, Group - Any with Movement	EA	1	
B.1.48	Pipe/Tubing, Group - Any with Movement - grout	EA	1	
B.1.49	Spare Rect, 0-400 Square Inch - Single	EA	1	
B.1.50	Spare Rect, 0-400 Square Inch - Single - grout	EA	1	
B.1.51	Spare Rect, >400-1300 Square Inch - Single	EA	6	
B.1.52	Spare Rect, >400-1300 Square Inch - Single - grout	EA	1	
B.1.53	Spare Rect, >1300 Square Inch - Single	EA	2	
B.1.54	Spare Rect, >1300 Square Inch - Single - grout	EA	1	
B.1.55	Spare, 0"-6" Diam - Single	EA	135	
B.1.56	Spare, 0"-6" Diam - Single - grout	EA	1	
B.1.57	Spare, >6" - 12" Diam - Single	EA	6	
B.1.58	Spare, >6" - 12" Diam - Single - grout	EA	1	
B.1.59	Spare, >12" Diam - Single	EA	0	
B.1.60	Spare, >12" Diam - Single - grout	EA	0	
B.1.61	Steel Angle - Single	EA	0	
B.1.62	Steel Angle - Membrane	EA	0	
B.1.63	Threaded Rod - Single	EA	0	
B.1.64	Threaded Rod - Membrane	EA	0	
B.1.65	Steel Beam Rect Opening 0-150 Square Inch - Single	EA	0	
B.1.66	Steel Beam Rect Opening >150 Square Inch - Single	EA	0	
B.1.67	Steel Beam Rect Opening 0-150 Square Inch - Membrane	EA	0	
B.1.68	Steel Beam Rect Opening >150 Square Inch - Membrane	EA	0	
B.1.69	Steel Beam Scribed 0-4 LF - Single	EA	0	
B.1.70	Steel Beam Scribed >4 LF - Single	EA	0	
B.1.71	Steel Beam Scribed 0-4 LF - Membrane	EA	0	
B.1.72	Steel Beam Scribed >4 LF - Membrane	EA	0	

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

B.1.73	HSS Tube SII Scribed 0-2 LF - Single	EA	0	(b)(4)
B.1.74	HSS Tube SII Scribed >2 LF - Single	EA	0	
B.1.75	HSS Tube SII Scribed 0-2 LF - Membrane	EA	0	
B.1.76	HSS Tube SII Scribed >2 LF - Membrane	EA	0	
B.1.77	Unistrut/Double Unistrut - Single	EA	0	
B.1.78	Unistrut/Double Unistrut - Membrane	EA	0	
B.1.79	Ground Wire - Single	EA	0	
B.1.80	Ground Wire - Membrane	EA	0	
B.1.81	Steel Plate 0-4 LF - Single	EA	0	
B.1.82	Steel Plate >4-8 LF - Single	EA	0	
B.1.83	Steel Plate >8 LF - Single	EA	0	
B.1.84	Steel Plate 0-4 LF - Membrane	EA	0	
B.1.85	Steel Plate >4-8 LF - Membrane	EA	0	
B.1.86	Steel Plate >8 LF - Membrane	EA	0	
B.1.87	WT X-Brace - Single	EA	0	
B.1.88	WT X-Brace - Membrane	EA	0	
B.1.89	Back to Back WT - Single	EA	0	
B.1.90	Back to Back WT - Membrane	EA	0	
B.1.91	Steel Pipe Support - Single	EA	0	
B.1.92	Steel Pipe Support - Membrane	EA	0	
B.1.93	Steel Channel - Single	EA	0	
B.1.94	Steel Channel - Membrane	EA	0	
B.1.95	Steel Tubing - Single	EA	0	
B.1.96	Steel Tubing - Membrane	EA	0	
B.1.97	Sprinkler Pipe - Single	EA	0	
B.1.98	Tray 4x6 - 4x18 - Single	EA	5	
B.1.99	Tray >4x18 - 4x36 - Single	EA	4	
B.1.100	Tray - Group	EA	2	
B.1.101	No Bin	EA	0	
B.1.102	Joint Seal	EA	0	
SUBTOTAL - CONCRETE WALL/CEILING				(b)(4)

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
CONCRETE FLOOR					
B.2.1	Conduit, Single	EA	0	(b)(4)	
B.2.2	Conduit, Single - grout	EA	1		
B.2.3	Conduit - Group (2-10)	EA	119		
B.2.4	Conduit - Group (2-10) - grout	EA	1		
B.2.5	Conduit - Group >10	EA	0		
B.2.6	Conduit - Group >10 - grout	EA	0		
B.2.7	Duct-Rect. 0"-80" L in - Single	EA	12		
B.2.8	Duct-Rect. >80"-160" L in - Single	EA	16		
B.2.9	Duct-Rect. >160" L in - Single	EA	0		
B.2.10	Duct-Rnd 0"-20" Diam. - Single	EA	19		
B.2.11	Duct-Rnd >20"-40" - Single	EA	3		
B.2.12	Duct-Rnd >40" - Single	EA	0		
B.2.13	Duct Group	EA	0		
B.2.14	Duct-Rect. 0"-80" L in - Single - Movement	EA	0		
B.2.15	Duct-Rect. >80"-160" L in - Single - Movement	EA	0		
B.2.16	Duct-Rect. >160" L in - Single - Movement	EA	0		
B.2.17	Duct-Rnd 0"-20" - Single - Movement	EA	0		
B.2.18	Duct-Rnd >20"-40" - Single - Movement	EA	0		
B.2.19	Duct-Rnd >40" - Single - Movement	EA	0		
B.2.20	Duct Group Movement	EA	0		
B.2.21	Bus, Single	EA	3		
B.2.22	Bus, Group	EA	0		
B.2.23	Pipe, 0"-6" Diam - Single	EA	133		
B.2.24	Pipe, 0"-6" Diam - Single - grout	EA	1		
B.2.25	Pipe, >6"-12" Diam - Single	EA	8		
B.2.26	Pipe, >6"-12" Diam - Single - grout	EA	1		
B.2.27	Pipe, >12" Diam - Single	EA	0		
B.2.28	Pipe, >12" Diam - Single - grout	EA	1		
B.2.29	Pipe, 0"-6" Diam - Single - Movement	EA	42		
B.2.30	Pipe, 0"-6" Diam - Single - Movement - grout	EA	1		
B.2.31	Pipe, >6"-12" Diam - Single - Movement	EA	1		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

B.2.32	Pipe, >6"-12" Diam - Single - Movement - grout	EA	1	(b)(4)
B.2.33	Pipe, >12" Diam - Single - Movement	EA	0	
B.2.34	Pipe, >12" Diam - Single - Movement - grout	EA	1	
B.2.35	Pipe/Tubing, All 0"-6" - Group (2-5)	EA	0	
B.2.36	Pipe/Tubing, All 0"-6" - Group (2-5) - grout	EA	1	
B.2.37	Pipe/Tubing, All 0"-6" - Group (6-10)	EA	0	
B.2.38	Pipe/Tubing, All 0"-6" - Group (6-10) - grout	EA	1	
B.2.39	Pipe/Tubing, All 0"-6" - Group (>10)	EA	0	
B.2.40	Pipe/Tubing, All 0"-6" - Group (>10) - grout	EA	0	
B.2.41	Pipe/Tubing, Any >6" - Group (2-5)	EA	0	
B.2.42	Pipe/Tubing, Any >6" - Group (2-5) - grout	EA	0	
B.2.43	Pipe/Tubing, Any >6" - Group (6-10)	EA	0	
B.2.44	Pipe/Tubing, Any >6" - Group (6-10) - grout	EA	0	
B.2.45	Pipe/Tubing, Any >6" - Group (>10)	EA	0	
B.2.46	Pipe/Tubing, Any >6" - Group (>10) - grout	EA	0	
B.2.47	Pipe/Tubing, Group - Any with Movement	EA	0	
B.2.48	Pipe/Tubing, Group - Any with Movement - grout	EA	1	
B.2.49	Spare Rect, 0-400 Square Inch - Single	EA	21	
B.2.50	Spare Rect, 0-400 Square Inch - Single - grout	EA	1	
B.2.51	Spare Rect, >400-1300 Square Inch - Single	EA	4	
B.2.52	Spare Rect, >400-1300 Square Inch - Single - grout	EA	1	
B.2.53	Spare Rect, >1300 Square Inch - Single	EA	0	
B.2.54	Spare Rect, >1300 Square Inch - Single - grout	EA	1	
B.2.55	Spare, 0"-6" Diam - Single	EA	129	
B.2.56	Spare, 0"-6" Diam - Single - grout	EA	1	
B.2.57	Spare, >6" - 12" Diam - Single	EA	18	
B.2.58	Spare, >6" - 12" Diam - Single - grout	EA	1	
B.2.59	Spare, >12" Diam - Single	EA	0	
B.2.60	Spare, >12" Diam - Single - grout	EA	0	
B.2.61	Steel Angle - Single	EA	0	
B.2.62	Steel Angle - Membrane	EA	0	
B.2.63	Threaded Rod - Single	EA	0	
B.2.64	Threaded Rod - Membrane	EA	0	
B.2.65	Steel Beam Rect Opening 0-150 Square Inch - Single	EA	0	
B.2.66	Steel Beam Rect Opening >150 Square Inch - Single	EA	0	
B.2.67	Steel Beam Rect Opening 0-150 Square Inch - Membrane	EA	0	
B.2.68	Steel Beam Rect Opening >150 Square Inch - Membrane	EA	0	
B.2.69	Steel Beam Scribed 0-4 LF - Single	EA	0	
B.2.70	Steel Beam Scribed >4 LF - Single	EA	0	
B.2.71	Steel Beam Scribed 0-4 LF - Membrane	EA	0	
B.2.72	Steel Beam Scribed >4 LF - Membrane	EA	0	
B.2.73	HSS Tube SII Scribed 0-2 LF - Single	EA	0	
B.2.74	HSS Tube SII Scribed >2 LF - Single	EA	0	
B.2.75	HSS Tube SII Scribed 0-2 LF - Membrane	EA	0	
B.2.76	HSS Tube SII Scribed >2 LF - Membrane	EA	0	
B.2.77	Unistrut/Double Unistrut - Single	EA	0	
B.2.78	Unistrut/Double Unistrut - Membrane	EA	0	
B.2.79	Ground Wire - Single	EA	0	
B.2.80	Ground Wire - Membrane	EA	0	
B.2.81	Steel Plate 0-4 LF - Single	EA	0	
B.2.82	Steel Plate >4-8 LF - Single	EA	0	
B.2.83	Steel Plate >8 LF - Single	EA	0	
B.2.84	Steel Plate 0-4 LF - Membrane	EA	0	
B.2.85	Steel Plate >4-8 LF - Membrane	EA	0	
B.2.86	Steel Plate >8 LF - Membrane	EA	0	
B.2.87	WT X-Brace - Single	EA	0	
B.2.88	WT X-Brace - Membrane	EA	0	
B.2.89	Back to Back WT - Single	EA	0	
B.2.90	Back to Back WT - Membrane	EA	0	
B.2.91	Steel Pipe Support - Single	EA	0	
B.2.92	Steel Pipe Support - Membrane	EA	0	
B.2.93	Steel Channel - Single	EA	0	
B.2.94	Steel Channel - Membrane	EA	0	
B.2.95	Steel Tubing - Single	EA	0	
B.2.96	Steel Tubing - Membrane	EA	0	
B.2.97	Sprinkler Pipe - Single	EA	0	

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

B.2.98	Tray 4x6 - 4x18 - Single	EA	8	(b)(4)	
B.2.99	Tray >4x18 - 4x36 - Single	EA	2		
B.2.100	Tray - Group	EA	0		
B.2.101	No Bin	EA	1		
B.2.102	Joint Seal	EA	0		
SUBTOTAL - CONCRETE FLOOR				(b)(4)	
ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
GWB					
B.3.1	Conduit, Single	EA	4308	(b)(4)	
B.3.2	Conduit, Single - grout	EA	0		
B.3.3	Conduit - Group (2-10)	EA	6		
B.3.4	Conduit - Group (2-10) - grout	EA	0		
B.3.5	Conduit - Group >10	EA	0		
B.3.6	Conduit - Group >10 - grout	EA	0		
B.3.7	Duct-Rect, 0"-80" L in - Single	EA	38		
B.3.8	Duct-Rect >80"-160" L in - Single	EA	9		
B.3.9	Duct-Rect >160" L in - Single	EA	4		
B.3.10	Duct-Rnd 0"-20" Diam. - Single	EA	21		
B.3.11	Duct-Rnd >20"-40" - Single	EA	5		
B.3.12	Duct-Rnd >40" - Single	EA	3		
B.3.13	Duct Group	EA	0		
B.3.14	Duct-Rect, 0"-80" L in - Single - Movement	EA	0		
B.3.15	Duct-Rect, >80"-160" L in - Single - Movement	EA	0		
B.3.16	Duct-Rect, >160" L in - Single - Movement	EA	3		
B.3.17	Duct-Rnd 0"-20" - Single - Movement	EA	0		
B.3.18	Duct-Rnd >20"-40" - Single - Movement	EA	0		
B.3.19	Duct-Rnd >40" - Single - Movement	EA	1		
B.3.20	Duct Group Movement	EA	0		
B.3.21	Bus, Single	EA	1		
B.3.22	Bus, Group	EA	0		
B.3.23	Pipe, 0"-6" Diam - Single	EA	731		
B.3.24	Pipe, 0"-6" Diam - Single - grout	EA	0		
B.3.25	Pipe, >6"-12" Diam - Single	EA	3		
B.3.26	Pipe, >6"-12" Diam - Single - grout	EA	0		
B.3.27	Pipe, >12" Diam - Single	EA	0		
B.3.28	Pipe, >12" Diam - Single - grout	EA	0		
B.3.29	Pipe, 0"-6" Diam - Single - Movement	EA	72		
B.3.30	Pipe, 0"-6" Diam - Single - Movement - grout	EA	0		
B.3.31	Pipe, >6"-12" Diam - Single - Movement	EA	4		
B.3.32	Pipe, >6"-12" Diam - Single - Movement - grout	EA	0		
B.3.33	Pipe, >12" Diam - Single - Movement	EA	1		
B.3.34	Pipe, >12" Diam - Single - Movement - grout	EA	0		
B.3.35	Pipe/Tubing, All 0"-6" - Group (2-5)	EA	0		
B.3.36	Pipe/Tubing, All 0"-6" - Group (2-5) - grout	EA	0		
B.3.37	Pipe/Tubing, All 0"-6" - Group (6-10)	EA	0		
B.3.38	Pipe/Tubing, All 0"-6" - Group (6-10) - grout	EA	0		
B.3.39	Pipe/Tubing, All 0"-6" - Group (>10)	EA	0		
B.3.40	Pipe/Tubing, All 0"-6" - Group (>10) - grout	EA	0		
B.3.41	Pipe/Tubing, Any >6" - Group (2-5)	EA	0		
B.3.42	Pipe/Tubing, Any >6" - Group (2-5) - grout	EA	0		
B.3.43	Pipe/Tubing, Any >6" - Group (6-10)	EA	0		
B.3.44	Pipe/Tubing, Any >6" - Group (6-10) - grout	EA	0		
B.3.45	Pipe/Tubing, Any >6" - Group (>10)	EA	0		
B.3.46	Pipe/Tubing, Any >6" - Group (>10) - grout	EA	0		
B.3.47	Pipe/Tubing, Group - Any with Movement	EA	0		
B.3.48	Pipe/Tubing, Group - Any with Movement - grout	EA	0		
B.3.49	Spare Rect, 0-400 Square Inch - Single	EA	0		
B.3.50	Spare Rect, 0-400 Square Inch - Single - grout	EA	0		
B.3.51	Spare Rect, >400-1300 Square Inch - Single	EA	0		
B.3.52	Spare Rect, >400-1300 Square Inch - Single - grout	EA	0		
B.3.53	Spare Rect, >1300 Square Inch - Single	EA	0		
B.3.54	Spare Rect, >1300 Square Inch - Single - grout	EA	0		
B.3.55	Spare, 0"-6" Diam - Single	EA	0		
B.3.56	Spare, 0"-6" Diam - Single - grout	EA	0		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
B.3.57	Spare, >6" - 12" Diam - Single	EA	0	(b)(4)	
B.3.58	Spare, >6" - 12" Diam - Single - grout	EA	0		
B.3.59	Spare, >12" Diam - Single	EA	0		
B.3.60	Spare, >12" Diam - Single - grout	EA	0		
B.3.61	Steel Angle - Single	EA	301		
B.3.62	Steel Angle - Membrane	EA	98		
B.3.63	Threaded Rod - Single	EA	17		
B.3.64	Threaded Rod - Membrane	EA	11		
B.3.65	Steel Beam Rect Opening 0-150 Square Inch - Single	EA	417		
B.3.66	Steel Beam Rect Opening >150 Square Inch - Single	EA	10		
B.3.67	Steel Beam Rect Opening 0-150 Square Inch - Membrane	EA	32		
B.3.68	Steel Beam Rect Opening >150 Square Inch - Membrane	EA	26		
B.3.69	Steel Beam Scribed 0-4 LF - Single	EA	585		
B.3.70	Steel Beam Scribed >4 LF - Single	EA	136		
B.3.71	Steel Beam Scribed 0-4 LF - Membrane	EA	65		
B.3.72	Steel Beam Scribed >4 LF - Membrane	EA	75		
B.3.73	HSS Tube SII Scribed 0-2 LF - Single	EA	161		
B.3.74	HSS Tube SII Scribed >2 LF - Single	EA	2		
B.3.75	HSS Tube SII Scribed 0-2 LF - Membrane	EA	28		
B.3.76	HSS Tube SII Scribed >2 LF - Membrane	EA	0		
B.3.77	Unistrut/Double Unistrut - Single	EA	161		
B.3.78	Unistrut/Double Unistrut - Membrane	EA	22		
B.3.79	Ground Wire - Single	EA	5		
B.3.80	Ground Wire - Membrane	EA	0		
B.3.81	Steel Plate 0-4 LF - Single	EA	29		
B.3.82	Steel Plate >4-8 LF - Single	EA	93		
B.3.83	Steel Plate >8 LF - Single	EA	0		
B.3.84	Steel Plate 0-4 LF - Membrane	EA	27		
B.3.85	Steel Plate >4-8 LF - Membrane	EA	19		
B.3.86	Steel Plate >8 LF - Membrane	EA	1		
B.3.87	WT X-Brace - Single	EA	47		
B.3.88	WT X-Brace - Membrane	EA	19		
B.3.89	Back to Back WT - Single	EA	34		
B.3.90	Back to Back WT - Membrane	EA	0		
B.3.91	Steel Pipe Support - Single	EA	51		
B.3.92	Steel Pipe Support - Membrane	EA	2		
B.3.93	Steel Channel - Single	EA	26		
B.3.94	Steel Channel - Membrane	EA	1		
B.3.95	Steel Tubing - Single	EA	126		
B.3.96	Steel Tubing - Membrane	EA	0		
B.3.97	Sprinkler Pipe - Single	EA	468		
B.3.98	Tray 4x6 - 4x18 - Single	EA	20		
B.3.99	Tray >4x18 - 4x36 - Single	EA	38		
B.3.100	Tray - Group	EA	0		
B.3.101	No Bin	EA	0		
B.3.102	Joint Seal	EA	470		
SUBTOTAL - GWB					(b)(4)

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
SHAFT WALL					
B.4.1	Conduit, Single	EA	77	(b)(4)	
B.4.2	Conduit, Single - grout	EA			
B.4.3	Conduit - Group (2-10)	EA	0		
B.4.4	Conduit - Group (2-10) - grout	EA			
B.4.5	Conduit - Group >10	EA	0		
B.4.6	Conduit - Group >10 - grout	EA			
B.4.7	Duct-Rect, 0"-50" L in - Single	EA	7		
B.4.8	Duct-Rect >60"-160" L in - Single	EA	13		
B.4.9	Duct-Rect >160" L in - Single	EA	2		
B.4.10	Duct-Rnd 0"-20" Diam. - Single	EA	5		
B.4.11	Duct-Rnd >20"-40" - Single	EA	2		
B.4.12	Duct-Rnd >40" - Single	EA	2		
B.4.13	Duct Group	EA	0		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
B.4.14	Duct-Rect, 0"-80" L in - Single - Movement	EA	0	(b)(4)	
B.4.15	Duct-Rect, >80"-160" L in - Single - Movement	EA	1		
B.4.16	Duct-Rect, >160" L in - Single - Movement	EA	1		
B.4.17	Duct-Rnd 0"-20" - Single - Movement	EA	0		
B.4.18	Duct-Rnd >20"-40" - Single - Movement	EA	0		
B.4.19	Duct-Rnd >40" - Single - Movement	EA	2		
B.4.20	Duct Group Movement	EA	0		
B.4.21	Bus, Single	EA	0		
B.4.22	Bus, Group	EA	0		
B.4.23	Pipe, 0"-6" Diam - Single	EA	378		
B.4.24	Pipe, 0"-6" Diam - Single - grout	EA			
B.4.25	Pipe, >6"-12" Diam - Single	EA	4		
B.4.26	Pipe, >6"-12" Diam - Single - grout	EA			
B.4.27	Pipe, >12" Diam - Single	EA	1		
B.4.28	Pipe, >12" Diam - Single - grout	EA			
B.4.29	Pipe, 0"-6" Diam - Single - Movement	EA	27		
B.4.30	Pipe, 0"-6" Diam - Single - Movement - grout	EA			
B.4.31	Pipe, >6"-12" Diam - Single - Movement	EA	2		
B.4.32	Pipe, >6"-12" Diam - Single - Movement - grout	EA			
B.4.33	Pipe, >12" Diam - Single - Movement	EA	3		
B.4.34	Pipe, >12" Diam - Single - Movement - grout	EA			
B.4.35	Pipe/Tubing, All 0"-6" - Group (2-5)	EA	0		
B.4.36	Pipe/Tubing, All 0"-6" - Group (2-5) - grout	EA			
B.4.37	Pipe/Tubing, All 0"-6" - Group (6-10)	EA	0		
B.4.38	Pipe/Tubing, All 0"-6" - Group (6-10) - grout	EA			
B.4.39	Pipe/Tubing, All 0"-6" - Group (>10)	EA	0		
B.4.40	Pipe/Tubing, All 0"-6" - Group (>10) - grout	EA			
B.4.41	Pipe/Tubing, Any >6" - Group (2-5)	EA	0		
B.4.42	Pipe/Tubing, Any >6" - Group (2-5) - grout	EA			
B.4.43	Pipe/Tubing, Any >6" - Group (6-10)	EA	0		
B.4.44	Pipe/Tubing, Any >6" - Group (6-10) - grout	EA			
B.4.45	Pipe/Tubing, Any >6" - Group (>10)	EA	0		
B.4.46	Pipe/Tubing, Any >6" - Group (>10) - grout	EA			
B.4.47	Pipe/Tubing, Group - Any with Movement	EA	0		
B.4.48	Pipe/Tubing, Group - Any with Movement - grout	EA			
B.4.49	Spare Rect, 0-400 Square Inch - Single	EA	0		
B.4.50	Spare Rect, 0-400 Square Inch - Single - grout	EA			
B.4.51	Spare Rect, >400-1300 Square Inch - Single	EA	0		
B.4.52	Spare Rect, >400-1300 Square Inch - Single - grout	EA			
B.4.53	Spare Rect, >1300 Square Inch - Single	EA	0		
B.4.54	Spare Rect, >1300 Square Inch - Single - grout	EA			
B.4.55	Spare, 0"-6" Diam - Single	EA	0		
B.4.56	Spare, 0"-6" Diam - Single - grout	EA			
B.4.57	Spare, >6" - 12" Diam - Single	EA	0		
B.4.58	Spare, >6" - 12" Diam - Single - grout	EA			
B.4.59	Spare, >12" Diam - Single	EA	0		
B.4.60	Spare, >12" Diam - Single - grout	EA			
B.4.61	Steel Angle - Single	EA	12		
B.4.62	Steel Angle - Membrane	EA	3		
B.4.63	Threaded Rod - Single	EA	0		
B.4.64	Threaded Rod - Membrane	EA	0		
B.4.65	Steel Beam Rect Opening 0-150 Square Inch - Single	EA	13		
B.4.66	Steel Beam Rect Opening >150 Square Inch - Single	EA	5		
B.4.67	Steel Beam Rect Opening 0-150 Square Inch - Membrane	EA	0		
B.4.68	Steel Beam Rect Opening >150 Square Inch - Membrane	EA	0		
B.4.69	Steel Beam Scribed 0-4 LF - Single	EA	29		
B.4.70	Steel Beam Scribed >4 LF - Single	EA	16		
B.4.71	Steel Beam Scribed 0-4 LF - Membrane	EA	7		
B.4.72	Steel Beam Scribed >4 LF - Membrane	EA	4		
B.4.73	HSS Tube Stl Scribed 0-2 LF - Single	EA	3		
B.4.74	HSS Tube Stl Scribed >2 LF - Single	EA	0		
B.4.75	HSS Tube Stl Scribed 0-2 LF - Membrane	EA	0		
B.4.76	HSS Tube Stl Scribed >2 LF - Membrane	EA	0		
B.4.77	Unistrut/Double Unistrut - Single	EA	3		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
B.4.78	Unistrut/Double Unistrut - Membrane	EA	5	(b)(4)	
B.4.79	Ground Wire - Single	EA	1		
B.4.80	Ground Wire - Membrane	EA	0		
B.4.81	Steel Plate 0-4 LF - Single	EA	4		
B.4.82	Steel Plate >4-8 LF - Single	EA	0		
B.4.83	Steel Plate >8 LF - Single	EA	0		
B.4.84	Steel Plate 0-4 LF - Membrane	EA	0		
B.4.85	Steel Plate >4-8 LF - Membrane	EA	0		
B.4.86	Steel Plate >8 LF - Membrane	EA	0		
B.4.87	WT X-Brace - Single	EA	2		
B.4.88	WT X-Brace - Membrane	EA	0		
B.4.89	Back to Back WT - Single	EA	0		
B.4.90	Back to Back WT - Membrane	EA	3		
B.4.91	Steel Pipe Support - Single	EA	12		
B.4.92	Steel Pipe Support - Membrane	EA	0		
B.4.93	Steel Channel - Single	EA	1		
B.4.94	Steel Channel - Membrane	EA	2		
B.4.95	Steel Tubing - Single	EA	0		
B.4.96	Steel Tubing - Membrane	EA	0		
B.4.97	Sprinkler Pipe - Single	EA	12		
B.4.98	Tray 4x6 - 4x18 - Single	EA	23		
B.4.99	Tray >4x18 - 4x36 - Single	EA	26		
B.4.100	Tray - Group	EA	0		
B.4.101	No Bin	EA	0		
B.4.102	Joint Seal	EA	0		
SUBTOTAL - Shaft Wall					(b)(4)

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
RADIATION					
B.5.1	Conduit, Single	EA	20	(b)(4)	
B.5.2	Conduit, Single - grout	EA	0		
B.5.3	Conduit - Group (2-10)	EA	134		
B.5.4	Conduit - Group (2-10) - grout	EA	0		
B.5.5	Conduit - Group >10	EA	0		
B.5.6	Conduit - Group >10 - grout	EA	0		
B.5.7	Duct-Rect, 0"-80" L in - Single	EA	10		
B.5.8	Duct-Rect >80"-160" L in - Single	EA	8		
B.5.9	Duct-Rect >160" L in - Single	EA	0		
B.5.10	Duct-Rnd 0"-20" Diam. - Single	EA	4		
B.5.11	Duct-Rnd >20"-40" - Single	EA	0		
B.5.12	Duct-Rnd >40" - Single	EA	0		
B.5.13	Duct Group	EA	0		
B.5.14	Duct-Rect, 0"-80" L in - Single - Movement	EA	0		
B.5.15	Duct-Rect, >80"-160" L in - Single - Movement	EA	0		
B.5.16	Duct-Rect, >160" L in - Single - Movement	EA	0		
B.5.17	Duct-Rnd 0"-20" - Single - Movement	EA	0		
B.5.18	Duct-Rnd >20"-40" - Single - Movement	EA	0		
B.5.19	Duct-Rnd >40" - Single - Movement	EA	0		
B.5.20	Duct Group Movement	EA	0		
B.5.21	Bus, Single	EA	0		
B.5.22	Bus, Group	EA	0		
B.5.23	Pipe, 0"-6" Diam - Single	EA	103		
B.5.24	Pipe, 0"-6" Diam - Single - grout	EA	0		
B.5.25	Pipe, >6"-12" Diam - Single	EA	0		
B.5.26	Pipe, >6"-12" Diam - Single - grout	EA	0		
B.5.27	Pipe, >12" Diam - Single	EA	0		
B.5.28	Pipe, >12" Diam - Single - grout	EA	0		
B.5.29	Pipe, 0"-6" Diam - Single - Movement	EA	41		
B.5.30	Pipe, 0"-6" Diam - Single - Movement - grout	EA	0		
B.5.31	Pipe, >6"-12" Diam - Single - Movement	EA	0		
B.5.32	Pipe, >6"-12" Diam - Single - Movement - grout	EA	0		
B.5.33	Pipe, >12" Diam - Single - Movement	EA	0		
B.5.34	Pipe, >12" Diam - Single - Movement - grout	EA	0		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
B.5.35	Pipe/Tubing, All 0"-6" - Group (2-5)	EA	0	(b)(4)	
B.5.36	Pipe/Tubing, All 0"-6" - Group (2-5) - grout	EA	0		
B.5.37	Pipe/Tubing, All 0"-6" - Group (6-10)	EA	0		
B.5.38	Pipe/Tubing, All 0"-6" - Group (6-10) - grout	EA	0		
B.5.39	Pipe/Tubing, All 0"-6" - Group (>10)	EA	0		
B.5.40	Pipe/Tubing, All 0"-6" - Group (>10) - grout	EA	0		
B.5.41	Pipe/Tubing, Any >6" - Group (2-5)	EA	0		
B.5.42	Pipe/Tubing, Any >6" - Group (2-5) - grout	EA	0		
B.5.43	Pipe/Tubing, Any >6" - Group (6-10)	EA	0		
B.5.44	Pipe/Tubing, Any >6" - Group (6-10) - grout	EA	0		
B.5.45	Pipe/Tubing, Any >6" - Group (>10)	EA	0		
B.5.46	Pipe/Tubing, Any >6" - Group (>10) - grout	EA	0		
B.5.47	Pipe/Tubing, Group - Any with Movement	EA	0		
B.5.48	Pipe/Tubing, Group - Any with Movement - grout	EA	0		
B.5.49	Spare Rect. 0-400 Square Inch - Single	EA	50		
B.5.50	Spare Rect. 0-400 Square Inch - Single - grout	EA	0		
B.5.51	Spare Rect. >400-1300 Square Inch - Single	EA	0		
B.5.52	Spare Rect. >400-1300 Square Inch - Single - grout	EA	0		
B.5.53	Spare Rect. >1300 Square Inch - Single	EA	0		
B.5.54	Spare Rect. >1300 Square Inch - Single - grout	EA	0		
B.5.55	Spare, 0"-6" Diam - Single	EA	159		
B.5.56	Spare, 0"-6" Diam - Single - grout	EA	0		
B.5.57	Spare, >6" - 12" Diam - Single	EA	5		
B.5.58	Spare, >6" - 12" Diam - Single - grout	EA	0		
B.5.59	Spare, >12" Diam - Single	EA	0		
B.5.60	Spare, >12" Diam - Single - grout	EA	0		
B.5.61	Steel Angle - Single	EA	0		
B.5.62	Steel Angle - Membrane	EA	0		
B.5.63	Threaded Rod - Single	EA	0		
B.5.64	Threaded Rod - Membrane	EA	0		
B.5.65	Steel Beam Rect Opening 0-150 Square Inch - Single	EA	0		
B.5.66	Steel Beam Rect Opening >150 Square Inch - Single	EA	0		
B.5.67	Steel Beam Rect Opening 0-150 Square Inch - Membrane	EA	0		
B.5.68	Steel Beam Rect Opening >150 Square Inch - Membrane	EA	0		
B.5.69	Steel Beam Scribed 0-4 LF - Single	EA	0		
B.5.70	Steel Beam Scribed >4 LF - Single	EA	0		
B.5.71	Steel Beam Scribed 0-4 LF - Membrane	EA	0		
B.5.72	Steel Beam Scribed >4 LF - Membrane	EA	0		
B.5.73	HSS Tube SII Scribed 0-2 LF - Single	EA	0		
B.5.74	HSS Tube SII Scribed >2 LF - Single	EA	0		
B.5.75	HSS Tube SII Scribed 0-2 LF - Membrane	EA	0		
B.5.76	HSS Tube SII Scribed >2 LF - Membrane	EA	0		
B.5.77	Unistrut/Double Unistrut - Single	EA	0		
B.5.78	Unistrut/Double Unistrut - Membrane	EA	0		
B.5.79	Ground Wire - Single	EA	0		
B.5.80	Ground Wire - Membrane	EA	0		
B.5.81	Steel Plate 0-4 LF - Single	EA	0		
B.5.82	Steel Plate >4-8 LF - Single	EA	0		
B.5.83	Steel Plate >8 LF - Single	EA	0		
B.5.84	Steel Plate 0-4 LF - Membrane	EA	0		
B.5.85	Steel Plate >4-8 LF - Membrane	EA	0		
B.5.86	Steel Plate >8 LF - Membrane	EA	0		
B.5.87	WT X-Brace - Single	EA	0		
B.5.88	WT X-Brace - Membrane	EA	0		
B.5.89	Back to Back WT - Single	EA	0		
B.5.90	Back to Back WT - Membrane	EA	0		
B.5.91	Steel Pipe Support - Single	EA	0		
B.5.92	Steel Pipe Support - Membrane	EA	0		
B.5.93	Steel Channel - Single	EA	0		
B.5.94	Steel Channel - Membrane	EA	0		
B.5.95	Steel Tubing - Single	EA	0		
B.5.96	Steel Tubing - Membrane	EA	0		
B.5.97	Sprinkler Pipe - Single	EA	0		
B.5.98	Tray 4x6 - 4x18 - Single	EA	10		

**Exhibit "C" QUANTITIES PRICING AND DATA
ATTACHMENT 1**

ITEM NO	DESCRIPTION	UNIT	ESTIMATED QTY	UNIT RATE	NOT-TO EXCEED TOTAL
B.5.99	Tray >4x18 - 4x36 - Single	EA	0	(b)(4)	
B.5.100	Tray - Group	EA	0		
B.5.101	No Bin	EA	0		
B.5.102	Joint Seal	EA	0		
SUBTOTAL - Shaft Wall					(b)(4)
TOTAL SUBCONTRACT PRICE					\$14,020,749.56

**HANFORD TANK WASTE TREATMENT AND
IMMOBILIZATION PLANT**

**ENGINEER, PROCURE AND CONSTRUCT (EPC)
SUBCONTRACT**

**EXHIBIT "D" - SCOPE OF WORK AND TECHNICAL
REQUIREMENTS**

REVISION 003

24590-CM-FC1-AYFP-00001

**ENGINEER, PROCURE AND CONSTRUCT (EPC) SUBCONTRACT
EXHIBIT "D" - SCOPE OF WORK AND TECHNICAL REQUIREMENTS**

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**ENGINEER, PROCURE AND CONSTRUCT (EPC) SUBCONTRACT
EXHIBIT "D" - SCOPE OF WORK AND TECHNICAL REQUIREMENTS**

ACRONYMS AND ABBREVIATIONS

AHJ	Authority Having Jurisdiction
BNI	Bechtel National, Inc.
CM	BNI's designation for Commercial Quality Level and Services
DOE	US Department of Energy
EJ	Engineering Judgment
EQ	Equipment
EPA	Environmental Protection Agency
FM	FM Global
HVAC	Heating, Ventilation, and Air-Conditioning
LAB	Analytical Laboratory
LAW	Low Active Waste
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NRTL	Nationally Recognized Testing Laboratory
NSR	No Seal Required
PFPE	Project Fire Protection Engineer
PSS	Penetration Seal Schedule
Q	Nuclear quality designation applied to Safety Significant and Safety Class SSCs
QAP	Quality Assurance Program
QA/QC	Quality Assurance/Quality Control
QVRP	Quality Verification Record Package
RE	Responsible Engineer
RFP	Request for Proposal
SC	Subcontract Coordinator
SFPP	SUBCONTRACTOR Fire Protection Professional
SSC	Systems, Structures, and Components
STR	Subcontract Technical Representative
UL	Underwriters Laboratories, Inc.
WTP	Hanford Tank Waste Treatment and Immobilization Plant

ENGINEER, PROCURE AND CONSTRUCT (EPC) SUBCONTRACT

EXHIBIT "D" - SCOPE OF WORK AND TECHNICAL REQUIREMENTS

1.0 PROJECT / PROGRAM GOALS, AND OBJECTIVES / PROJECT DESCRIPTION

The Hanford Tank Waste Treatment and Immobilization Plant (WTP) is a complex of radioactive waste treatment processing facilities designed and constructed by Bechtel National, Inc. (BNI) for the US Department of Energy (DOE). The facility will process the Hanford Site tank waste and put the waste into a stable glass form. The processed waste will be shipped to other sites for ultimate disposal. Hanford tank waste consists of approximately 190 million curies in 54 million gallons of highly radioactive and mixed hazardous waste stored in underground storage tanks at the Hanford Site. The tank waste includes solids (sludge); liquids (supernatant); and salt cake (dried salts that will dissolve in water, forming supernatant). The facility will remediate, process, and store the radioactive and hazardous tank waste to meet regulatory requirements.

The DOE Office of River Protection (ORP) in Richland, Washington, is responsible for the activities necessary to remediate the Hanford tank waste. Through the WTP Prime Contract, BNI manages and oversees the design, construction, and commissioning of the WTP Site. WTP consists of the following five major facilities:

- High-Level Waste (HLW)
- Low-Activity Waste (LAW)
- Pretreatment Facility (PTF)
- Analytical Laboratory (LAB)
- Balance of Facilities (BOF)

SUBCONTRACTOR performs all the work necessary to provide the following:

SUBCONTRACTOR shall provide design, procurement, and installation of penetration and joint seals as described in Exhibit "D" Scope of Work and the Subcontract Documents. The Work includes penetration and joint seals for both fire rated assemblies and non-rated assemblies and other criteria as identified in the specifications and Penetration Seal Schedule (PSS).

All penetration and joint seals included in the LAW/LAB Penetration Seal Request for Proposal (RFP) are designated Non-Important to Safety (CM) quality level. See Subcontract Exhibit "J" Quality Assurance Program, Supplier Category "Manufacturing (Design/Build)" quality assurance program requirements.

2.0 SCOPE OF WORK

- 2.1 SUBCONTRACTOR shall engineer, furnish and install, and inspect penetration and joint seals for the LAW/LAB Penetration and Joint Seals Subcontract in accordance with the Subcontract Documents.
- 2.2 SUBCONTRACTOR shall supply necessary technical and professional services to engineer, furnish and install, and inspect penetration and joint seals; engineering for development of Engineering Judgments, new designs, testing and interpretations and analysis of test results, and supply of penetration and joint seal designs and material; coordination of shipping, transportation, delivery and temperature controlled storage of materials; supply construction supervision, labor, inspection, testing, Quality Verification Record Packages (QVRPs), documentation packages, equipment, motorized manlifts, tools, consumables and supplies, miscellaneous materials, and incidentals required for installations; overhead and profit, and all other costs, whether direct or indirect, required to complete the LAW/LAB Penetration and Joint Seals Subcontract work in accordance with the Subcontract Documents.
- 2.3 All Work shall be in accordance with the Scope of Work (Exhibit "D"), Technical Specifications (Exhibit "E"), Drawings (Exhibit "F"), SUBCONTRACTOR Submittal Requirements (Exhibit "I"), Quality Assurance Program (QAP) Requirements (Exhibit "J"), and the codes and standards referenced in the Subcontract Documents. In addition, SUBCONTRACTOR shall incorporate materials that utilize recovered and recycled materials for identified items, to the maximum extent practicable in regard to current and competitive market offerings.

3.0 WORK LOCATION

3.1 The Project site is located in the 200 East Area of the Hanford Reservation approximately 22 miles north of Richland, Washington.

4.0 WORK SCHEDULE

4.1 See Exhibit "B", SC - 10 Commencement, Progress, and Completion of the Work.

5.0 GENERAL FACILITY DESCRIPTIONS

5.1 Low Activity Waste (LAW) Facility

5.1.1 The Building is approximately 344,000 square foot four-story structure including a basement process area with a footprint of approximately 160 feet by 300 feet. The building foundation, interior pour caves, transfer tunnels, and process areas are cast-in-place concrete, building superstructure is a steel frame with non-bearing gypsum board partitions.

5.1.2 The facility consists of the main process areas, receiving and storage areas, LAW Annex, and LAW Switchgear Building.

5.1.2.1 The LAW Annex is adjacent to the main process facility and has a limited joint seal scope of work as indicated in Exhibit D-3.

5.1.2.2 The LAW Switchgear Building is north of the main process facility and is excluded from this Subcontract.

5.2 Analytical Laboratory (LAB)

5.2.1 The building is approximately 90,000 square feet two-story steel frame building with below-grade concrete vessel cells with a footprint of approximately 162 feet by 300 feet.

5.2.2 The interior consists of two general areas, identified as LAB Process Area and LAB Administration Area. The LAB Process Area contains hot cells, analytical radiological labs, and maintenance shop area. The LAB Administration Area includes the LAB Offices and the LAB Suites.

5.2.2.1 Include joint seals in the LAB suites areas in locations as indicated in Exhibit D-3.

6.0 ENGINEERING

6.1 Penetration Seal Schedule (PSS) Database and Model Access

6.1.1 CONTRACTOR has created a PSS Database for use by the CONTRACTOR and SUBCONTRACTOR.

6.1.1.1 Note joint seals are excluded from the PSS Database.

6.1.1.2 A limited quantity of field verified previously installed field routed commodities are included in the PSS Database. Actual quantities shall be determined by Field Walkdowns per Section 6.4.

6.1.2 CONTRACTOR will provide SUBCONTRACTOR a dedicated on-site computer work station for access to the PSS Database and the 3-D model.

6.1.3 SUBCONTRACTOR shall be provided read access to the PSS database. SUBCONTRACTOR shall be given limited write access to selected PSS database fields to perform data entry activities discussed in Section 6.2 and 6.4.

6.1.4 CONTRACTOR will provide SUBCONTRACTOR read only access to the 3-D model along with a macro created for printing individual wall elevation informational drawings, refer to Attachment D-5 for example prints.

6.1.4.1 Note that only modeled commodities will appear in the macro generated wall elevations and that field routed commodities are not and will not be added to the 3-D model.

6.2 Design Package Submittal

Prior to preparation of Design Packages SUBCONTRACTOR shall provide a submittal identifying, for each Pay Item and Variance identified in Exhibit C, an NRTL design, or if no NRTL design is available those that SUBCONTRACTOR proposes an EJ or NRTL Test for, if any.

6.2.1 Design Package Submittal Numbering. Prior to submitting Design Packages CONTRACTOR will provide SUBCONTRACTOR with submittal numbers for identification of Design Packages.

6.2.1.1 SUBCONTRACTOR shall include the Design Package Submittal numbers on submittal cover page and input the number into corresponding PSS Database field.

6.2.2 SUBCONTRACTOR shall prepare Design Package Submittals for each penetration and joint seal type. Penetration and joint seal Design Package Submittals shall include the following:

6.2.2.1 Design Package Submittal number

6.2.2.2 General penetration or joint seal category (Pay Item, refer to Exhibit C Volume I)

6.2.2.3 Penetration and joint seal design including:

6.2.2.3.1 Identification of NRTL design utilized, or

6.2.2.3.2 Identification of EJ, or

6.2.2.3.3 Documentation and analysis of test results for new designs.

6.2.2.4 Material Safety Data Sheets (MSDS)

6.2.2.5 Identification of penetration seal material composition for each penetration listed in Attachment D-6.

6.2.2.6 Installation procedures

6.2.2.7 Maintenance and repair procedures and instructions

6.2.2.8 Inspection details and hold points as indicated in Form G-321-E, *Engineering Document Requirements*, refer to Attachment D-1.

6.2.2.9 "Snapshot" of PSS listing the penetrations for which the Design Package is applicable. SUBCONTRACTOR shall provide the "Snapshot" of PSS for each Work Release/Work Package.

6.2.2.10 Fire Protection Review Board (FPRB) meetings shall be held on site weekly. SUBCONTRACTOR's SFPE attendance shall be required to present EJs.

6.3 Preparation of Penetration Seal and Joint Seal Design Package Submittals

6.3.1 NRTL Design or EJ: For penetration seals where SUBCONTRACTOR selects an NRTL design or an EJ based on a NRTL design, SUBCONTRACTOR shall proceed with Design Package Submittals for CONTRACTOR review.

6.3.1.1 EJs shall be signed by SFPP and the material manufacturer's fire protection professional prior to submitting. EJ Design Package Submittals shall include a Justification Summary Sheet. Refer to Attachment D-8 for example.

6.3.2 NRTL Testing: For penetration seals where SUBCONTRACTOR proposes to utilize a new design based on the results of SUBCONTRACTOR provided NRTL Testing Agency services.

6.3.2.1 SUBCONTRACTOR shall identify penetration requiring testing, provide written justification, and submit testing process based on CONTRACTOR performance criteria for CONTRACTOR review and acceptance.

6.3.2.2 Upon CONTRACTOR acceptance of SUBCONTRACTOR's justification and test plan SUBCONTRACTOR shall proceed with testing.

6.3.2.3 Once SUBCONTRACTOR provided testing services and analysis are satisfactorily completed. SUBCONTRACTOR shall proceed with submitting Design Package Submittals for CONTRACTOR review.

6.4 Field Routed Commodity Penetrations

6.4.1 For commodity penetrations identified during Field Walkdowns and not included in the PSS a change document, i.e. subcontractor Field Change Request (FCR) will be initiated. SUBCONTRACTOR shall input the following into the PSS Database:

6.4.1.1 Penetration location with delta X, and delta Y based on wall reference point.

6.4.1.2 Commodity type, ie. pipe, conduit, cable tray, etc.

6.4.1.3 Commodity size.

6.4.1.4 Notify CONTRACTOR when data input is completed.

6.4.2 CONTRACTOR shall then input penetration seal criteria (i.e. fire rating, W-rating, T-rating, etc) into the PSS Database and notify SUBCONTRACTOR once data entry is completed.

6.4.3 SUBCONTRACTOR then selects an NRTL design or an EJ based on a NRTL design and proceeds with Design Package Submittals per section 6.3 for CONTRACTOR review.

6.4.4 For field routed commodity penetration seals where SUBCONTRACTOR proposes to utilize a new design based on the results of SUBCONTRACTOR provided NRTL Testing Agency services refer to Section 6.2 and 6.3 for additional requirements.

6.5 Design of Post Installed Concrete Anchors

6.5.1 Refer to Engineering Specification for Design of Post Installed Concrete Anchors for CM Applications, 24590-WTP-3PS-FA02-T0003 for design of post installed concrete anchors.

6.5.1.1 Note that Non-Structural Anchors are exempt from being "design anchors". Refer to specification section 3.4 Non-Structural Anchors for non-structural criteria.

7.0 **FURNISH AND INSTALLATION**

7.1 Penetration Seals

7.1.1 Penetration seals in fire rated and non-fire rated assemblies shall meet the criteria documented in facility Penetration Seal Schedules, refer to Exhibit F.

7.1.2 Grouting of penetrations, spare sleeves, and blockouts through concrete walls and slabs as identified on the PSS and as requested by the CONTRACTOR.

7.1.2.1 Refer to Appendix 3 of Construction Procedure Grouting, 24590-WTP-GPP-CON-3204. Do not utilize grout materials identified as Q or CGD.

7.2 Joint Seals

7.2.1 Joint seals shall be installed as indicated in Attachment D-3 as required to maintain fire rating of assembly.

7.3 NRTL Testing

7.3.1 Provide NRTL Testing Agency services, interpretation and analysis of test results, and documentation of new penetration and joint seal designs.

7.3.2 New penetration and joint seal designs developed as a result of testing may be utilized as the basis for EJs.

7.4 Material Control Methods Matrix (MCMM)

7.4.1 MCMM is applicable and compliance is mandatory for SUBCONTRACTOR and all lower-tier subcontractors and suppliers.

7.4.2 SUBCONTRACTOR shall review and be familiar with the MCMM, refer to Exhibit E.

7.4.3 For the items and materials listed on the MCMM, SUBCONTRACTOR and all lower-tier subcontractors and suppliers, shall utilize only CM items and materials.

7.5 Penetration Systems Resistant to Radiation

7.5.1 Penetration seals listed in Attachment D-6 shall continue to perform their function when exposed to the following maximums for 40 year total integrated dose radiation exposure levels:

R5 LAW - 1.75E5 rads

R5 LAB - 2.89E5 rads

Note: No radiation protection is required for R1, R2 and R3 radiation exposure levels.

7.5.2 Materials proposed to meet these radiation exposure levels shall be reviewed and accepted by CONTRACTOR prior to installation.

7.5.3 Refer to Attachment D-7 for a list of material radiation damage threshold values for various materials. Use this list in conjunction with the Restricted Materials List, 24590-WTP-LIST-CON-08-0001, for appropriate selection of radiation resistant materials. A material is acceptable if the 40 year total integrated dose is less than the threshold value.

8.0 **INSPECTION**

8.1 SUBCONTRACTOR shall submit inspection plans required for the execution of the Work.

8.2 SUBCONTRACTOR shall comply with CONTRACTOR's inspection plan 24590-WTP-IP-FP-07-0001, *Inspection Plan for Gypsum Board/Shaft Wall Assemblies and Related Architectural Commodities.*

8.2.1 SUBCONTRACTOR shall identify required Inspection and Hold Points on SUBCONTRACTOR's approved schedules.

8.2.2 SUBCONTRACTOR shall notify CONTRACTOR 24 hours in advance of required inspections.

8.3 SUBCONTRACTOR shall perform inspections of penetration and joint seals in accordance with Specifications and Inspection Plan prior to PFPE Inspections.

9.0 QUALITY

9.1 Quality Verification Records

9.1.1 Required Quality Verification records as indicated in Form G-321-V *Quality Verification Document Requirements*, refer to Attachment D-2, for each Work Package.

9.2 Quality Assurance Requirements

9.2.1 SUBCONTRACTOR shall provide and maintain a Quality Assurance Program in alignment with Exhibit "J", Quality Assurance Program (QAP) Requirements.

10.0 WORK NEAR EQUIPMENT, UTILITIES, AND FINISHED SURFACES

10.1 SUBCONTRACTOR will be working in an environment of installed equipment, utilities, and finished surfaces. SUBCONTRACTOR shall provide necessary protection to prevent damage during the performance of the Work.

10.2 Refer to specification 24590-WTP-3PS-NW00-T0002, Engineering Specification for Chemical Requirements for Materials Used in Contact with Austenitic Stainless Steel and Nickel Based Alloys included in Exhibit E for restrictions in the use of consumables (non-permanent) materials.

11.0 RELATED WORK

11.1 SUBCONTRACTOR shall be required to coordinate with CONTRACTOR and other subcontractors for installation of interfacing commodities, coatings applications, and temporary installations and maintenance activities that are not included in this scope of work. Such activities include, but are not limited to the following:

11.1.1 Fire Protection sprinkler system piping, supports, and bracing.

11.1.2 HVAC system duct, supports, bracing, and insulation.

11.1.3 Mechanical equipment, and associated support structures.

11.1.4 Process piping, scheduled and field installed commodities, supports, bracing, and insulation.

11.1.5 Electrical equipment, panels, scheduled and field installed commodities, supports and bracing.

11.1.6 Fire detection and communication enclosures, panels, field installed commodities, supports and bracing.

11.1.7 Instrumentation enclosures, panels, field installed commodities, supports and bracing.

11.1.8 Primary, secondary and miscellaneous steel structures, supports and bracing.

11.1.9 Special Protective Coatings (SPCs) and architectural coatings.

11.1.10 Gypsum wallboard partition walls.

11.1.11 Concrete walls and floor systems.

11.1.12 Temporary installations including, but not limited to, CONTRACTOR scaffolding, equipment and material laydown areas.

11.1.13 CONTRACTOR maintenance operations including, but not limited to, crane and equipment service.

12.0 WORK EXCLUDED

12.1 Not Used

12.2 Penetration Seals in the LAW Annex and LAW Switchgear Building, refer to Attachment D-4.

12.3 Penetrations through exterior siding and roofing, unless noted otherwise

12.4 Penetrations identified as quality level 'Q' in the Penetration Seal Schedule

12.5 Penetrations identified as 'NSR' or 'SBO' in the Penetration Seal Schedule

12.6 Sealing interior of electrical conduit

12.7 Not used.

12.8 HVAC Ducts with fire dampers

13.0 NOT USED

14.0 MOBILIZATION AT THE WTP CONSTRUCTION SITE

14.1 SUBCONTRACTOR shall provide temporary facilities (site office trailers, temperature controlled storage trailers, etc.), and construction equipment (equipment for receiving and transporting of materials, man lifts, etc.) as needed to complete the Work. Refer to Exhibit B, Contractor-Furnished Utilities and Facilities. After award, but before mobilization, CONTRACTOR shall provide a sketch detailing the location of temporary facilities and material lay-down area(s).

14.2 CONTRACTOR shall provide crane and freight elevator services for SUBCONTRACTOR activities requiring equipment and material transport to the upper elevations of the LAW and Lab process areas (note: freight elevator not available for Lab work). Required crane activities shall be identified by SUBCONTRACTOR in the CONTRACTOR-approved Work Execution Plan, and discussed at daily coordination meetings. Crane activities shall be carried out in accordance with WTP Procedures for Rigging Work Operations (reference Exhibit "G"), and be implemented to an approved Work Package. Crane activities shall be planned to maximize crane efficiency and limit unnecessary crane mobilization. Advance notice of eight (8) working days prior to crane need date(s) shall be provided by SUBCONTRACTOR to the CONTRACTOR.

14.3 SUBCONTRACTOR shall mobilize all non-manual and manual labor, equipment, tools, and materials as required to complete the Work in accordance with the Subcontract schedule milestones.

14.4 Prior to performing any physical work, SUBCONTRACTOR shall generate work packages in accordance with WTP procedures, including, but not limited to, Work Control and Work Packaging, Hazard Analysis and Control, and Electrical Safety in the Workplace (reference Exhibit "G"). Work Packages shall clearly define the work scope, instruction, hazard and controls for each task. Work Packages will be formatted in a logical sequence agreed to by both parties, incorporating the PSS released and field installed condition, Design Document Packages, Job Hazard Analyses and Quality Verification Records. Work Packages will be formatted in a way that promotes well-organized development of SUBCONTRACTOR Quality Verification Record Package (QVRP) submittals. SUBCONTRACTOR shall not proceed with any physical work without the proper hazard analysis and CONTRACTOR Work Package release authorization.

15.0 TRAINING

15.1 Requirements associated with installation certifications for manual employees shall be met by SUBCONTRACTOR prior to mobilizing manual employees on-site. Any deviation (i.e., on-site specialized training requested by SUBCONTRACTOR) will be requested in advance to CONTRACTOR prior to commencing training activities.

15.2 SUBCONTRACTOR shall maintain training records and make them available at CONTRACTOR's request. CONTRACTOR may verify training records maintained by SUBCONTRACTOR at any time throughout the course of the Work.

16.0 TECHNICAL DRAWINGS

16.1 See Exhibit F for drawings relevant to the Work.

17.0 TECHNICAL SPECIFICATIONS

17.1 See Exhibit E for specifications relevant to the Work.

17.2 SUBCONTRACTOR shall submit documentation as listed in Attachment D-1 Form G-321-E and Attachment D-2 Form G-321-V.

17.3 SUBCONTRACTOR is responsible to provide all submittals required by the Subcontract Documents and for ensuring full coordination with CONTRACTOR requirements.

17.4 Submittals shall conform to Exhibit "I," SUBCONTRACTOR Submittal Requirements.

18.0 CONTRACTOR PROCUREMENT OF RECYCLED-CONTENT PRODUCTS

18.1 CONTRACTOR is responsible for complying with the Federal requirement to purchase certain products made of recycled material called "recycled-content". It is CONTRACTOR's policy to purchase EPA-designated recycled content products, including items containing recovered materials, to the maximum extent practicable. This Section applies to the purchase of the following items:

18.2

Major Category	Additional Description
Construction Products	
1. Building insulation products	Loose-fill insulation, including but not limited to cellulose fiber, mineral fibers (fiberglass and rock wool). Blanket and batt insulation, including but not limited to mineral fibers (fiberglass and rock wool).

19.0 OTHER REQUIREMENTS

19.1 Preservation Maintenance

19.1.1 SUBCONTRACTOR shall be responsible for preservation maintenance of penetration and joint seals from time of installation through acceptance of QVRP Work Package. Documentation shall be provided as part of final Quality Verification Document Package. Refer to Attachment D-2 Form G-321-V, Document Category 4.4, Maintenance Records.

20.0 ATTACHMENTS

- ATTACHMENT D-1 FORM G-321-E, ENGINEERING DOCUMENT REQUIREMENTS
- ATTACHMENT D-2 FORM G-321-V, QUALITY VERIFICATION DOCUMENT REQUIREMENTS
- ATTACHMENT D-3 JOINT SEAL LOCATIONS
- ATTACHMENT D-4 LAW DEFINING WALL GRAPHIC (INFORMATION ONLY)
- ATTACHMENT D-5 EXAMPLE MACRO GENERATED INFORMATIONAL WALL ELEVATIONS (INFORMATION ONLY)
- ATTACHMENT D-6 PENETRATION SEALS EXPOSED TO R5 RADIATION LEVELS
- ATTACHMENT D-7 MATERIAL RADIATION DAMAGE THRESHOLD VALUES
- ATTACHMENT D-8 EXAMPLE JUSTIFICATION SUMMARY SHEET

21.0 REVISION HISTORY

<i>Rev.</i>	<i>Date</i>	<i>Revision</i>
0	4/2/12	Initial Issue
1	12/6/12	Revised to add section on penetration systems resistant to radiation and remove perimeter joint seal from scope.
2	1/9/13	Per direction from Fire Protection AHJ, added Attachment D-8 Example WTP Fire Protection Engineering Analysis Cover Sheets for SUBCONTRACTOR to include with EJs and added requirement for SUBCONTRACTOR'S SFPE to attend FPRB meetings as needed.
3	5/13/13	Revised Exhibit D, Section 6.0, Engineering and Form G-321-E to require SUBCONTRACTOR to provide a submittal identifying NRTL designs, EJs or tests, if any, for each Pay Item and Variance identified in Exhibit C prior to preparation of Design Package Submittals.



ATTACHMENT D-1 – FORM G-321-E, ENGINEERING DOCUMENT REQUIREMENTS

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

1. DOCUMENT CATEGORY NUMBER	2. SPECIFICATION PARAGRAPH REFERENCE	3. DOCUMENT DESCRIPTION	4. PERMISSION TO PROCEED REQUIRED	5. SUBMITTAL SCHEDULE	6. QUANTITY REQUIRED		7. KIND OF COPIES	8. REMARKS
					Initial	Final		
General Requirements								
36.0	Exhibit D, Section 6.2	Identification of NRTL Design or Proposed EJ or NRTL Test for each Pay Item and Variance.	Yes	D	1	1	P	
Specification 24590-WTP-3PS-ATFS-T0001, "Engineering Specification for Through-Penetration Firestop Systems" (07841)								
1.2. & 1.3	1.6, A., 4.	Detail System Drawings	Yes	F	1	1	P	
4.1	1.6, A., 2.	Installation Procedures	Yes	F	1	1	P	
4.4	1.9, A	Site Storage and Handling	Yes	F	1	1	P	
11.0	1.6, A., 3.	Product Data Sheet	Yes	F	1	1	P	
11.0	1.6, A., 5.	Product Certifications of Compliance and Product Test Reports	Yes	F	1	1	P	
11.0	1.6, A., 6.	Material Safety Data Sheets (MSDS)	Yes	F	1	1	P	
14.0	1.6, A., 10.	Manufacturer's Repair Instructions and Procedures	Yes	F	1	1	P	
25.0	1.6, A., 7.	Manufacturer's Instructions for Inspections and Acceptance Criteria	Yes	F	1	1	P	
27.0	1.6, A., 8.	Engineering Judgments	Yes	F	1	1	P	
25.0	1.6, A., 9.	Manufacturer's Installation and Maintenance Instructions	Yes	F	1	1	P	
25.0	1.6, A., 11.	Inspection Checklist with Hold Points	Yes	F	1	1	P	
27.0	1.6, B., 1	Qualification Test Reports	Yes	F	1	1	P	
1.2. & 1.3	1.6, B., 1	Installation Drawings	Yes	F	1	1	P	
36.0	Exhibit D, Section 6.2.2.9	"Snapshot" of PSS	Yes	F	1	1	P	
Specification 24590-WTP-3PS-ATFS-T0002, "Engineering Specification for Fire Resistive Joint Systems" (07842)								
1.2 & 1.3	1.4, B.	Shop Drawings	Yes	F	1	1	P	
4.4	1.4, G.	Site Storage and Handling	Yes	F	1	1	P	
8.0	1.4, E.	Qualification Test Reports	Yes	F	1	1	P	
11.0	1.4, A.	Product Data	Yes	F	1	1	P	
11.0	1.4, C.	Manufacturer's Compatibility and Adhesion	Yes	F	1	1	P	
11.0	1.4, D.	Material Safety Data Sheets (MSDS)	Yes	F	1	1	P	

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

1. DOCUMENT CATEGORY NUMBER	2. SPECIFICATION PARAGRAPH REFERENCE	3. DOCUMENT DESCRIPTION	4. PERMISSION TO PROCEED REQUIRED	5. SUBMITTAL SCHEDULE	6. QUANTITY REQUIRED		7. KIND OF COPIES	8. REMARKS
					Initial	Final		
25.0	1.4, F.	Manufacturer's Instructions for Inspections and Acceptance Criteria	Yes	F	1	1	P	
29.0	1.4, I.	Shipping Preparation Procedures	Yes	F	1	1	P	
36.0	1.4, H.	Material Control Procedures for Storage and Handling	Yes	F	1	1	P	
<i>Specification 24590-WTP-3PS-FA02-T0001, "Engineering Specification for Purchase of Post-Installed Concrete Anchors for CM Applications"</i>								
11.0	4.2.1	ICBO Evaluation Services Reports	Yes	F	1	1	P	
4.1 and 11.0	4.2.2	Technical Documentation	Yes	F	1	1	P	
11.0	4.2.3 and 4.2.4	Chemical Anchor Product Data	Yes	F	1	1	P	
29.0	4.2.5	Shipping procedures	Yes	F	1	1	P	
15.0	4.2.6	Coating Documentation	Yes	F	1	1	P	
<i>Specification 24590-WTP-3PS-FA02-T0003, Engineering Specification for Design of Post Installed Concrete Anchors for CM Applications</i>								
36.0	Exhibit D, section 6.5	Calculation	Yes	F	1	1	P	
<i>Specification 24590-WTP-3PS-FA02-T0004, "Engineering Specification for Installation and Testing of Post-Installed Concrete Anchors and Drilling/Coring of Concrete"</i>								
6.1	5.1 & 5.2	Inspection and Test Plan	Yes	F	1	1	P	Submit Notice of Testing (15) days prior to Testing for CONTRACTOR Witness

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

ENGINEERING DOCUMENT CATEGORY DEFINITIONS G-321-E - SUP A

(E) Engineering Documents. This term comprises procedures, drawings, specifications, QA plans, prototype qualification test reports, and other similar documents that require Bechtel permission to proceed prior to fabrication, or prior to use of the document on the design, fabrication, installation, or other work progress. The term is also applied to price lists, and instructions for erection/installation, operation, maintenance, and site storage and handling.

A. DEFINITION OF TERMS

(Note: Standard abbreviated titles follow the category definitions.)

Supplier - This is a comprehensive term and includes seller, vendor, contractor, subcontractor, subsupplier, etc.

Original - The initial document of which copies are made, i.e., handwritten copy, typed copy, printed matter, tracings or drawings and photographs.

Reproducible - A master copy which can be legibly duplicated by either microreproduction, diazo or electrostatic process. Diazo sepias may be submitted, only if they meet and satisfy Bechtel microfilming requirements.

Microfilm - Film containing an image reduced in size from the original and capable of being enlarged to a clear reproduction of the original.

Electronic - Electronic media formatted as specified in the Purchase Order. Seller should contact Bechtel for formatting requirements if not clearly specified or if not clear.

Permission to Proceed Required - Bechtel review required prior to use of documents in the design, fabrication, installation, or other work process.

Initial - The first submittal of a document in accordance with the schedule mutually agreed to by Bechtel and the supplier.

Final - The submittal that reflects the required resolution of review comments or the complete submittal required. Drawings submitted as final shall show Bechtel's job title, job number, procurement document number, line, equipment, tag or code number and the manufacturer's serial number(s).

B. SUBMITTAL

In column 5, Bechtel Engineering to place the following codes where applicable:

F - Before Fabrication	I - Before Installation	W - With Shipment
S - Before Shipment	P - Before Final Payment	D - Before Design
U - Before Use		

or

Expressed in calendar weeks after notice of award.

In column 7, Bechtel Engineering to place the following letter as applicable:

E - Electronic
M - Microfilm
R - Reproducible
O - Original
P - Print

In column 8, Bechtel Engineering to provide any further explanation or comments..

C. DISTRIBUTION

Items and/or documents required to be provided by the G-321-E shall be forwarded to Bechtel as identified in Section 3 of the MR/PO.

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

D. DOCUMENT CATEGORY NUMBERS & ABBREVIATED DESCRIPTIONS

Engineering Documents are identified and defined as follows:

- 1.0 SUPPLIER'S INDEX/SCHEDULE (FORM 15EX) - The Supplier shall list all drawings and documents on this form, including submittal dates. The supplier shall identify exactly how data requested on the G 321-E and G 321-V forms will be submitted and shall identify and agree to the schedule dates for the submittal of documents. MR section 3 contains blank 15EX form and provides instructions to complete this form.
- 1.1 OUTLINE DIMENSIONS, SERVICES, FOUNDATIONS AND MOUNTING DETAILS (OUTLINE DIM, SERVICES & FDN/MTG DETS) - Drawing providing external envelope, including lugs, centerline(s), location and size for electrical cable, conduit, fluid, and other service connections, isometrics and details related to foundations and mountings.
- 1.2 ASSEMBLY DRAWINGS (ASSEMBLY DWGS) - Detailed drawings indicating sufficient information to facilitate assembly of the component parts of an equipment item.
- 1.3 SHOP DETAIL DRAWINGS (SHOP DET DWGS) - Drawings that provide sufficient detail to facilitate fabrication, manufacture or installation. This includes pipe spool drawings, internal piping and wiring details, cross-section details and structural and architectural details.
- 1.4 WIRING DIAGRAMS (WIRING DIAGS) - Drawings that show schematic diagrams, equipment internal wiring diagrams, interconnection wiring diagrams for electrical items, and security program.
- 1.5 CONTROL LOGIC DIAGRAMS (CONT LOGIC DIAGS) - Drawings that show paths, which input signals must follow to accomplish the required responses.
- 1.6 PIPING AND INSTRUMENTATION DIAGRAMS (P&IDs) - Drawings that show piping system scheme and control elements.
- 2.0 PARTS LIST AND COST - Sectional view with identified parts, detailed parts description (material, size, etc), OEM and vendor part number, lead time, and recommended spare parts and source information for operations, testing, and maintenance activities with unit cost. When available, update information for replacement parts for newer models or equipment. When referring to gaskets, seals, etc, identify material type (i.e. Viton, EPDM, BUNA-N, etc). For fasteners, identify grade, material, length, diameter, thread, etc.
- 3.0 COMPLETED BECHTEL DATA SHEETS AND SPREADSHEETS (COMP DATA SHT) - Information provided by a supplier on data sheets (e.g. QA data sheet, Design data sheet, Design Verification data sheet) furnished by Bechtel.
- 4.1 ERECTION/INSTALLATION INSTRUCTIONS (EREC/INSTL INST) - Detailed written procedures, instructions, and drawings required to erect or install material or equipment.
- 4.2 OPERATING INSTRUCTIONS - Detailed written instructions describing how an item or system should be operated. Operation manuals for systems, subsystems, and equipment that include system descriptions and controls, operating standards and codes), recommended personal protective equipment, operating procedures, operating logs, wiring diagrams, control diagrams, instrument and piping diagrams, precautions and licensing requirements, . Operation and maintenance documentation directory that includes lists of documents, systems, equipment, components, and a table of contents. The general manual layout includes title page, table of contents, manual contents and vendor contact information (such as telephone and fax numbers, and e-mail address).
- 4.3 MAINTENANCE INSTRUCTIONS - Detailed written instructions required to disassemble, reassemble, and maintain items or systems in an operating condition. Maintenance manuals for the care and maintenance of products, materials, finishes, systems and equipment that include content divided into sections for each system/subsystem and individual products outside of a system, source information, product information, maintenance procedures, repair materials, lubricants (API or SAE service standard and at least 3 substitutions), and sources including vendor service representative contact information, maintenance and service schedules, maintenance and service contracts, and warranties and bonds, special tools (including M&TE), and related certificate of compliance or calibration. The general manual layout includes title page, table of contents, manual contents and vendor contact information (such as telephone and fax numbers, and e-mail address). Photographs could be provided under this category. Schedule for submittal shall be 90 days prior to shipment.
- 4.4 SITE STORAGE AND HANDLING INSTRUCTIONS (SITE STOR & HDLG) - Detailed written instructions which define the requirements and time period for lubrication, rotation, heating, lifting, packaging, cure date for elastometrics (e.g., gaskets, seals, o-rings, etc.) or other handling requirements to prevent damage or deterioration during long or short term storage (i.e., ANSI A, B, C, D) and handling at jobsite. This includes return shipping instructions. Schedule for submittal shall be 90 days prior to shipment.
- 4.5 EMERGENCY MANUALS - Emergency manuals that include the type of emergency, emergency instructions, emergency procedures, and emergency call-out personnel and contact numbers. The general manual layout includes title page, table of contents, manual contents and vendor contact information (such as telephone and fax numbers, and e-mail address).

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

- 4.6 TRAINING MATERIALS - If available, Training materials or media (such as videotapes, CDs) that include information or instruction (courses) from the manufacturers to use in training personnel to properly operate and maintain the equipment and systems.
- 5.0 SCHEDULES: ENGINEERING AND FABRICATION/ERECTION (SCHED) (ENGRG & FAB EREC) - Bar charts or critical path method diagrams which detail the chronological sequence of activities. (See Section 6 of the MR/PO)
- 6.0 QUALITY ASSURANCE MANUAL/PROCEDURES (QA MNL/PROC) - The document(s) that describe(s) the planned and systematic measures that are used to assure that structures, systems, and components will meet the requirements of the procurement documents.
- 6.1 INSPECTION AND TEST PLAN - Detailed description of the inspections and tests planned during the receipt, manufacturing, and conformance verification activities. Includes identification of Bechtel and supplier witness and hold points.
- 7.0 SEISMIC DATA REPORT - The analytical or test data that provides data and demonstrates suitability of material, component or system in relation to the conditions imposed by the stated seismic criteria. Includes seismic qualification test program, and weight and center of gravity report.
- 8.0 ANALYSIS, CALCULATION, AND DESIGN REPORT (ANAL & DSGN RPRT) - The analytical data (stress, electrical loading, fluid dynamics, thermal, chemical, fatigue, structural, radiation tolerance, code, etc.), which demonstrates that an item satisfies specified requirements. Include calculations for detailed design, code, nozzle load, etc.
- 9.0 ACOUSTIC DATA REPORT (ACST DATA RPRT) - The noise, sound, and other acoustic vibration data required by the procurement document.
- 10.0 SAMPLES - Physical samples such as weld samples, surface finish, coatings or linings.
- 10.1 TYPICAL QUALITY VERIFICATION DOCUMENTS (TYP QUAL VERIF DOC) - A representative data package which will be submitted for the items furnished as required in the procurement documents and G-321-V.
- 10.2 TYPICAL MATERIAL USED (TYP MAT USED) - A representative example of the material to be used.
- 11.0 MATERIAL DESCRIPTION (MAT DESCRPT) - The technical data describing a material which a supplier proposes to use. This also applies to architectural items and manufacturer's data, e.g., metal siding, decking, doors, paints, and coatings. MSDS sheets will be provided for all hazardous material including gaskets, lubricants, paints, coatings, etc.
- 12.0 WELDING PROCEDURES AND QUALIFICATIONS (WLDG PROC & QUALF) - The welding procedure, specification and supporting qualification records required for welding, hard facing, overlay, brazing and soldering.
- 13.0 MATERIAL CONTROL PROCEDURES (MATERIAL CONT PROC) - The procedures for controlling issuance, handling, storage and traceability of materials such as weld rod, production items or Government Owned Materials.
- 14.0 REPAIR PROCEDURES (REPAIR PROC) - The procedures for controlling material removal and replacement by welding, brazing, etc., subsequent thermal treatments, and final acceptance inspection.
- 15.0 CLEANING AND COATING PROCEDURES (CLNG & CTG PROC) - The procedures for removal of dirt, grease or other surface contamination and preparation and application of protective coatings.
- 16.0 HEAT TREATMENT PROCEDURES (HEAT TR PROC) - The procedures for controlling temperature and time at temperature as a function of thickness, furnace atmosphere, cooling rate and method, etc. This includes a Descaling Procedure, if applicable.
- 19.0 UT - ULTRASONIC EXAMINATION PROCEDURES (UT PROC) - Procedures for detection of presence and certain characteristics of discontinuities and inclusions in materials by the use of high frequency acoustic energy.
- 20.0 RT - RADIOGRAPHIC EXAMINATION PROCEDURES (RT PROC) - Procedures for detection of presence and certain characteristics of discontinuities and inclusions in materials by x-ray or gamma ray exposure of photographic film.
- 20.1 RT FILM - RADIOGRAPHIC FILM WITH TECHNIQUE AND READER SHEETS (RT FILM) - Original set of radiographic film with associated radiographic technique sheets and film reader sheets.
- 21.0 MT - MAGNETIC PARTICLE EXAMINATION PROCEDURES (MT PROC) - Procedures for detection of surface (or near surface) discontinuities in magnetic materials by distortion of an applied magnetic field.
- 22.0 PT - LIQUID PENETRANT EXAMINATION PROCEDURES (PT PROC) - Procedures for detection of surface discontinuities in materials by application of a penetrating liquid in conjunction with suitable developing techniques.
- 23.0 EDDY CURRENT EXAMINATION PROCEDURES (EDDY CUR EXAM PROC) - Procedures for detection of discontinuities in material by distortion of an applied electromagnetic field.

ENGINEERING DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

ENGINEERING DOCUMENT REQUIREMENTS

- 24.0 PRESSURE TEST - HYDRO, AIR, LEAK, BUBBLE OR VACUUM TEST PROCEDURE (PRESS TEST - HYDRO, AIR, BUBBLE - VAC TEST PROC) - Procedures for performing hydrostatic or pneumatic structural integrity and leakage tests.
- 25.0 INSPECTION PROCEDURE (INSPECT PROC) - Organized process followed for the purpose of determining that specified requirements (dimensions, properties, performance results, etc.) are met. Includes procedures for dimensional inspection, hardness testing, and wall thickness.
- 26.1 MECHANICAL TEST PROCEDURE (MECH TEST PROC) - Tests performed to demonstrate that functional design and operational parameters are met, e.g., pump performance data, valve stroking, load, temperature rise, calibration, environment, remote handling, load test, pipe bending, etc.
- 26.2 ELECTRICAL TEST PROCEDURE (ELEC TEST PROC) - Tests performed to demonstrate that functional design and operational parameters are met, e.g., impulse, overload, continuity, voltage, temperature rise, calibration, saturation loss, etc.
- 27.0 PROTOTYPE TEST REPORT (PROTO TYP TEST REPORT) - Report of a test which is performed on a standard or typical example of equipment or item, and is not required for each item produced in order to substantiate the acceptability of equal items. This may include tests that result in damage to the item(s) tested and failure data reports.
- 28.0 PERSONNEL QUALIFICATION PROCEDURES (PERSONL QUAL PROC) - Procedures for qualifying welders, inspectors, and other special process personnel.
- 29.0 SUPPLIER SHIPPING PREPARATION PROCEDURE (SPLR SHPNG PREP PROC) - The procedure used by a supplier to prepare finished materials or equipment for shipment from its facility to the jobsite.
- 29.1 SUPPLIER TRANSPORT AND LIFTING DRAWINGS (SPLR TRANSP LIFT DWGS) - For heavy lift and over-dimensional cargo only. Refer to Section 7, Item 6 of the PO.
- 30.0 SUPPLIER DEVIATION DISPOSITION REQUEST (SDDR) - Form required to document deviation requests from supplier. (See Section 2 of the MR/PO)
- 31.0 POSITIVE MATERIAL IDENTIFICATION PROCEDURE (PMI) - The procedure for performing PMI testing of materials.
- 32.0 SOFTWARE DOCUMENTATION - Required documentation that is needed to utilize supplier provided software.
- 33.0 COMMERCIAL GRADE DEDICATION DOCUMENTATION - Required documentation to support Commercial Grade Dedication activities.
- 34.0 FACTORY ACCEPTANCE TEST (FAT) - This applies to factory acceptance tests conducted at the supplier's facility.
- 35.0 ENVIRONMENTAL DATA REPORT - The analytical or test data that provides data and demonstrates the suitability of material, components, or systems in relation to the environmental conditions imposed by the stated criteria. Includes conformance statements, test reports, analysis, and documented past service conditions with equipment performance history.
- 36.0 OTHER - Other required documentation



ATTACHMENT D-2 – FORM G-321-V, QUALITY VERIFICATION DOCUMENT REQUIREMENTS

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

DOCUMENT CATEGORY NUMBER	SPECIFICATION PARAGRAPH REFERENCE	DOCUMENT DESCRIPTION	4. BECTHEL RELEASE	5. FIELD RECEIPT CHECK-IN	6. REMARKS	7. DOC. SUPPLIER PAGE COUNT
Specification 24590-WTP-3PS-ATFS-T0001, "Engineering Specification for Through-Penetration Firestop Systems" (07841)						
17.1	1.7, F., G., and H.	Test Report				
17.4	1.6, A., 5.	Certificate of Compliance				
25.0	1.6, A., 11.	Inspection Checklist with Hold Points				
25.0	1.7, E.	Inspection				
25.0	Exhibit D, Section 8.0	Inspection				
27.0	1.7, D.	Fire-Test-Response Characteristics				
Specification 24590-WTP-3PS-ATFS-T0002, "Engineering Specification for Fire Resistive Joint Systems" (07841)						
13.0	1.3, B.	Material Verification Reports				
17.1	1.3, M.	Material Test Reports				
17.1	1.4, E.	Qualification Test Reports				
17.4	1.3, C., D., E., F., G., H., J., K., and L.	Certificate of Compliance				
25.0	Exhibit D, Section 8.0	Inspection				

8. SUPPLIER'S ORDER NO.	9. SUPPLIER'S PART NO.	10. SUPPLIER'S PART NAME	11. QUANTITY
12. BECTHEL PO NO. (and Rev) 24590-	13. BECTHEL'S TAG OR EQUIPMENT NO.	14. BECTHEL'S PART NAME	15. PO ITEM NO.
16. SUPPLIERS CONFORMANCE STATEMENT We certify that the work and required documents meet the requirements of the procuring documents.		Authorized Supplier Signature	Title
17. BECTHEL QUALITY REPRESENTATIVE AT PLANT Work was released based on satisfactory completion of quality surveillance and review of documentation.		[] WITH AUTHORIZED DEVIATIONS NOTED IN COLUMN 6 [] NO DEVIATIONS	Signature of Bechtel SQR
18. RECEIVING AT THE FIELD This form and the Quality Verification Documents referenced herein have been received and their relationship to the hardware items verified.		Signature of Bechtel Field Representative	
19. FORWARD COPIES TO: Unless otherwise directed, the quality verification documents applicable to the shipment are delivered with the shipment. In all cases, the documentation is sufficiently packaged and sealed to prevent damage, loss, or unauthorized reproduction, alteration, or tampering. For all shipments subject to release authorization by a Bechtel SQR, the document packaging and sealing process is witnessed and accepted by the Bechtel SQR.			SPECIAL INSTRUCTIONS: Identify each page of the documentation package with the applicable Document Category Number (column 1) listed above. Do not tabulate the documents (column 7) in more than one category.
20. REQUISITION TITLE LAW/LAB Penetration and Joint Seals		21. REQUISITION NO. 24590-CM-SRA-AYFP-00001	22. REV. NO. 000
Form G-321-V	SUPPLIER DOCUMENT SUBMITTAL REQUIREMENTS © 2002 Bechtel National Inc.		G-321-V: Page 1 of 4

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

1. DOCUMENT CATEGORY NUMBER	2. SPECIFICATION PARAGRAPH REFERENCE	3. DOCUMENT DESCRIPTION	4. BECHTEL RELEASE	5. FIELD RECEIPT CHECK-IN	6. REMARKS	7. DOC. SUPPLIER PAGE COUNT
<i>Specification No. 24590-WTP-3PS-FA02-T0004, "Engineering Specification for Installation and Testing of Post-Installed Concrete Anchors and Drilling/Coring of Concrete"</i>						
25.0	5.1	Inspection Reports				

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

Bechtel National, Inc.

Hanford Tank Waste Treatment and Immobilization Plant (WTP)

QUALITY VERIFICATION DOCUMENT REQUIREMENTS

INSTRUCTIONS FOR THE PREPARATION OF FORM G-321-V (QUALITY VERIFICATION DOCUMENT REQUIREMENTS)

- A. **PURPOSE:** the G-321-V is initially prepared by Bechtel Engineering and completed by the supplier when providing Quality Verification Documents to Bechtel in support of the work. The G-321-V is a multi-purpose form to:
- (1) Transmit quality verification documents from the supplier.
 - (2) Provide a Certificate of Conformance from the supplier.
 - (3) For surveillance Level 1, 2, 3, 4 - Evidence SQR release of documentation and/or work.
 - (4) For surveillance Level 0 - Provide evidence of a Field Representative check of the quality verification documentation received at the installation site.

- B. **GENERAL INFORMATION:** Instructions for filling out the G-321-V form are found in Sections "D & E". Detailed quality verification document categories and definitions are found in Section F. For the PO Item number(s) being released (Entry 15), the supplier provides the completed G-321-V Form(s) and the supporting Quality Verification Documents.

- C. **DEFINITIONS OF TERMS:** (Also see document category definitions in Section F).

- **Supplier** - This is a seller, vendor, contractor, subcontractor, sub-supplier, etc.
- **Reproducible** - A copy, which can be legibly duplicated by either micro-reproduction, diazo or electrostatic process. Diazo sepias may be submitted only if they meet and satisfy Bechtel microfilming requirements.
- **Microfilm** - Film containing an image reduced in size from the original, and capable of being enlarged to a clear reproduction of the original.
- **Electronic** - Electronic data submitted in formats identified in Section 3 or as directed by Bechtel.
- **Drawings submitted as final** show title, job number, purchase order number, line, equipment, tag or code number and the manufacturer's serial number.

- D. **BECHTEL ENTRY INSTRUCTIONS:**

Entry No.	Information Required	Entry No.	Information Required
1.	Enter Document Category Number as shown in Section F.	17.	Upon satisfactory review of the Quality Verification Document Package and Associated Deviations, if any, the SQR or Bechtel's Authorized Representative signs and dates this block denoting release for shipment.
2.	Enter Specification Paragraph Reference, which addresses the subject document.	18.	Upon receipt of the Quality Verification Documentation Package at the jobsite, the Field Representative reviews the documents and the appropriate hardware. If found to be satisfactory, s/he signs and dates this block. Missing, incomplete or deficient items are brought to the attention of the supplier by Bechtel Field Procurement personnel.
3.	Enter Description or Abbreviated Description Corresponding to the Document Category Number.	19.	Enter special instructions, as appropriate.
4.	When Bechtel Shop Inspection is required as noted on the PO cover sheet, the SQR or Authorized Representative initials upon satisfactory review of the document(s).	20.	Description as stated on the Material Requisition
5.	Bechtel field receipt at the jobsite completes upon satisfactory checks of the document(s).	21.	M/R Number.
6.	Enter "Remarks" as appropriate. When a deviation has occurred, reference the deviation(s) and Authorization Document(s) in this column, and include the authorization document(s) in the verification package.	22.	M/R Revision Number.

- E. **SUPPLIER ENTRY INSTRUCTIONS:**

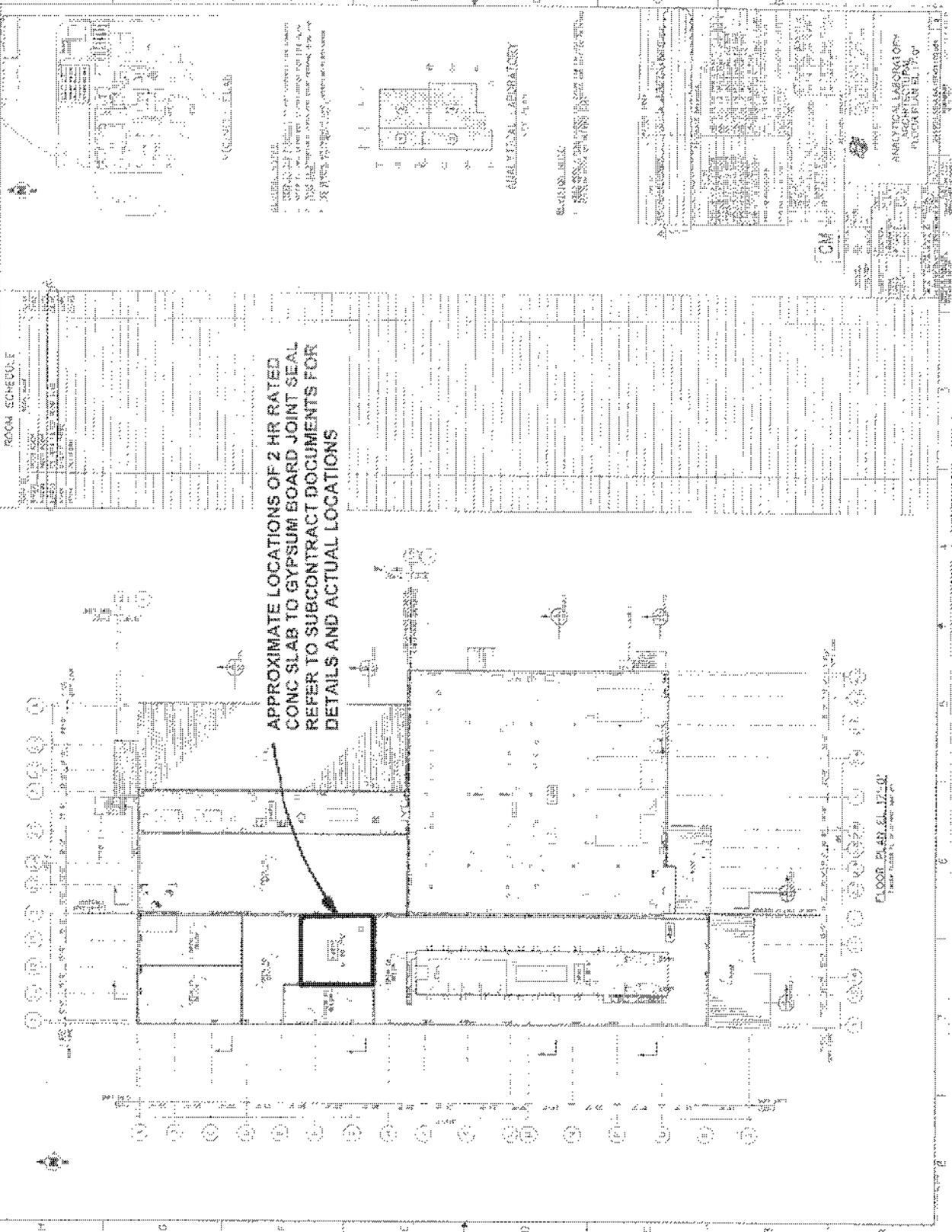
Entry No.	Information Required	Entry No.	Information Required
7.	Enter the number of pages of Quality Verification Document being submitted, corresponding to the units being released. If none, enter "0". Sign Entry 16.	15.	Enter the Bechtel PO Item number(s) that apply to the item(s) being shipped.
8,9,10	Enter information required.	16.	Supplier - Signature of an employee of the prime supplier identified in the QA Manual or by prime supplier's letter as authorized to sign such documents.
11.	Enter the quantity of units covered by the Quality Verification Documents being submitted with the G-321-V form.	19.	Upon Inspection Release, Entry 17, the completed Quality Verification Documents are forwarded by the supplier to the address(es) shown.
12,13,14	Enter information required.		Note: Where additional space is needed to provide requested information, attach additional pages. All pages must be identified and traceable to the applicable G-321-V.

- F. **DOCUMENT CATEGORY NUMBERS AND DETAILED DESCRIPTIONS** - Quality Verification Documents. This term comprises material test reports, heat treatment charts, welding records, NDE results, performance test reports, and similar document(s), which demonstrate or certify conformance to the technical or inspection requirements of the procurement documents.

- 4.4 MAINTENANCE RECORDS - Records of maintenance performed by the supplier.
- 12.0 WELDING QUALIFICATION VERIFICATION REPORTS - A verification report of welds performed including the identification of the qualified weld(s), and certification that the weld(s) were qualified.
- 13.0 MATERIAL VERIFICATION REPORTS - Reports relative to material which confirm, substantiate or assure that an activity or condition has been implemented in conformance with code and material specifications imposed by the procurement documents.
- 14.0 MAJOR REPAIR VERIFICATION REPORTS - Verification reports may include weld repair locations (maps), material test reports for filler material, pre- and post-weld heat treatment records, NDE records, etc. The resolution of whether a repair is major or not is a Bechtel responsibility.
- 15.0 CLEANING AND COATING VERIFICATION REPORTS - Verification reports include certification of visual examination for surface preparation, surface profile, materials, etc., humidity data and coating thickness data as required by the procurement documents.
- 16.0 HEAT TREAT REPORTS - Verification reports normally include furnace charts or similar records which identify and certify the item(s) treated, the procedures used, furnace atmospheres, time at temperature, cooling rate, etc.
- 17.1 MATERIAL TEST REPORTS - (MTR) - These reports include all chemical, physical, mechanical, and electrical property test data required by material specification and applicable codes. This also includes corrosion testing or other Buyer specified material testing. This is applicable to cement, concrete, metals, cable jacket materials, rebar, rebar splices, etc.
- 17.2 IMPACT TEST DATA - Results of Charpy or drop weight tests including specimen configuration, test temperature and fracture data.
- 17.3 FERRITE DATA - Report of the ferrite percentage for stainless steel materials used, including castings & welding filler metals as deposited.
- 17.4 MATERIAL CERTIFICATE OF COMPLIANCE - Verification document, which certifies conformance to the requirements of the applicable material specification.
- 17.5 ELECTRICAL PROPERTY REPORTS - Report of electrical characteristics, e.g., dielectric, impedance, resistance, flame tests, corona, etc.
- 18.0 CODE COMPLIANCE - Verifying documents (such as Forms U-1, N-1, State, etc.), which are prepared by the manufacturer or installer and certified by the Authorized Code Inspector.
- 19.0 UT - ULTRASONIC EXAMINATION AND VERIFICATION REPORTS - Examination results of presence and certain characteristics of discontinuities and inclusions in material by the use of high-frequency acoustic energy.
- 20.0 RT - RADIOGRAPHIC EXAMINATION AND VERIFICATION REPORTS - Examination results of presence and certain characteristics of discontinuities and inclusions in materials by x-ray or gamma ray exposure of photographic film.
- 21.0 MT - MAGNETIC PARTICLE EXAMINATION AND VERIFICATION REPORTS - Examination results of surface (or near surface) discontinuities in magnetic materials by distortion of an applied magnetic field.
- 22.0 PT - LIQUID PENETRANT EXAMINATION AND VERIFICATION REPORTS - Examination results of surface discontinuities in materials by application of a penetrating liquid in conjunction with suitable developing techniques.
- 23.0 EDDY CURRENT EXAMINATION AND VERIFICATION REPORTS - Examination results of discontinuities in material by distortion of an applied electromagnetic field.
- 24.0 PRESSURE TEST - HYDRO, AIR, LEAK, BUBBLE OR VACUUM TEST AND VERIFICATION REPORTS - Results of hydrostatic or pneumatic structural integrity and leakage tests.
- 25.0 WORK IN PROGRESS INSPECTION AND VERIFICATION REPORTS - Documented findings resulting from an inspection.
- 26.1 MECHANICAL TEST REPORTS - For pump performance data, valve stroking, load, temperature rise, calibration, environment, etc.
- 26.2 ELECTRICAL TEST REPORTS - For load, impulse, overload, continuity, voltage, temperature rise, calibration, saturation loss, etc.
- 27.0 PROTOTYPE TEST REPORT - Report of the test, which is performed on a standard or typical example of equipment, material or item, and is not required for each item produced in order to substantiate the acceptability of equal items. This normally includes tests, which may, or could be expected to, result in damage to the item(s) tested
- 30.0 SUPPLIER DEVIATION DISPOSITION REQUEST – Completed and approved form documenting supplier deviations to the order.
- 31.0 POSITIVE MATERIAL IDENTIFICATION (PMI) RESULTS – Documentation of PMI showing chemical properties and material classification.
- 33.0 COMMERCIAL GRADE DEDICATION DOCUMENTATION – Required documentation to support Commercial Grade Dedication activities.
- 34.0 FACTORY ACCEPTANCE TEST (FAT) – System test(s) conducted at the supplier's facility to demonstrate item or equipment performance meets specified requirements.
- 36.0 OTHER - Any special requirement document.



ATTACHMENT D-3 – JOINT SEAL LOCATIONS

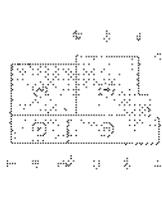


ROOM SCHEDULE

NO.	ROOM NO.	ROOM NAME	AREA (SQ. FT.)	FINISHES
1	101	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
2	102	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
3	103	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
4	104	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
5	105	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
6	106	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
7	107	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
8	108	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
9	109	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
10	110	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
11	111	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
12	112	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
13	113	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
14	114	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
15	115	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
16	116	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
17	117	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
18	118	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
19	119	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
20	120	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
21	121	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
22	122	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
23	123	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
24	124	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
25	125	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
26	126	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
27	127	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
28	128	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
29	129	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
30	130	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
31	131	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
32	132	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
33	133	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
34	134	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
35	135	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
36	136	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
37	137	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
38	138	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
39	139	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
40	140	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
41	141	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
42	142	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
43	143	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
44	144	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
45	145	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
46	146	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
47	147	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
48	148	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
49	149	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD
50	150	LABORATORY	1,200	CONC. SLAB, GYPSUM BOARD

APPROXIMATE LOCATIONS OF 2 HR RATED
 CONC SLAB TO GYPSUM BOARD JOINT SEAL
 REFER TO SUBCONTRACT DOCUMENTS FOR
 DETAILS AND ACTUAL LOCATIONS

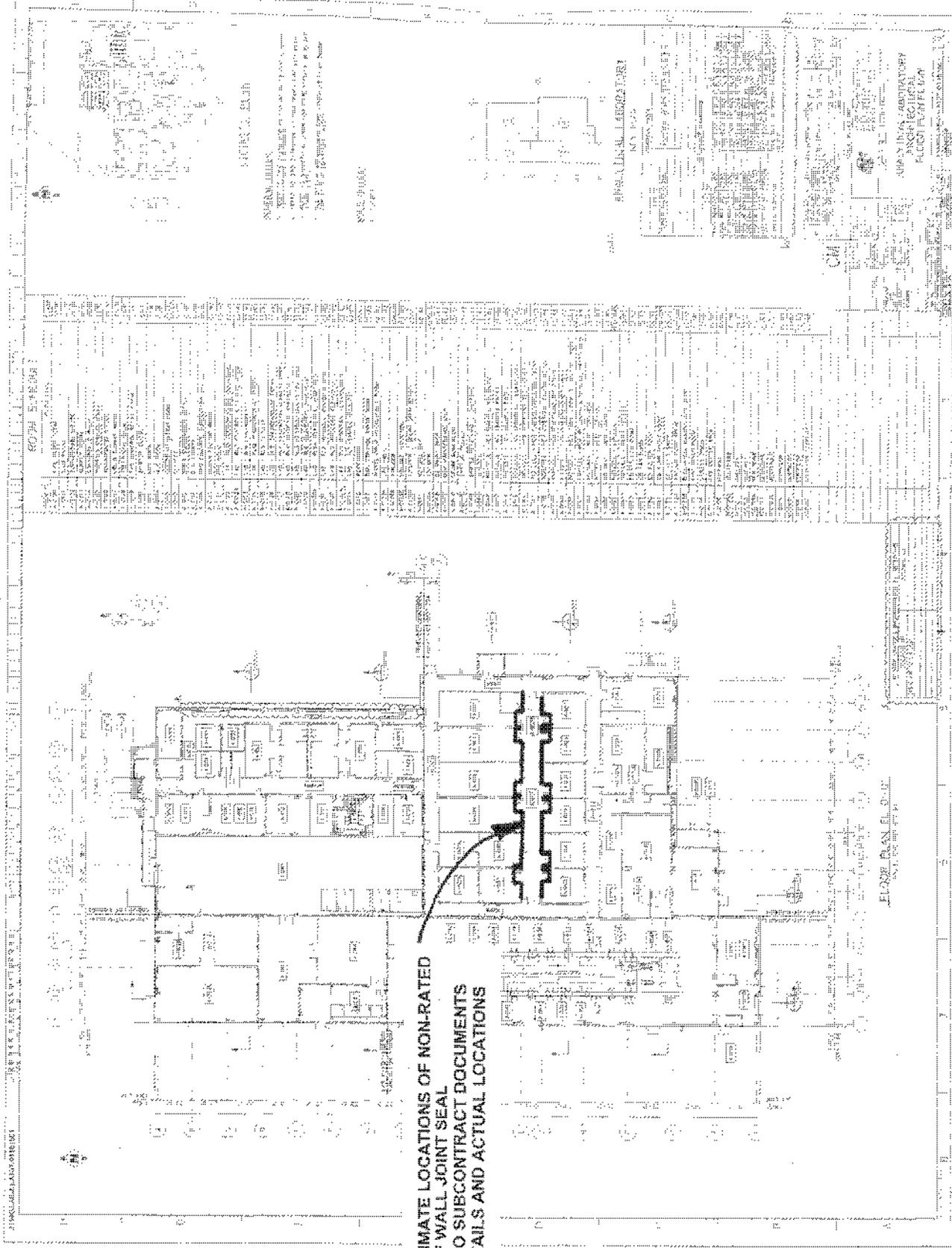
GENERAL NOTES:
 1. SEE ARCHITECT'S SPECIFICATIONS FOR THE PROJECT.
 2. THIS PLAN IS FOR INFORMATION ONLY. REFER TO THE CONTRACT DOCUMENTS FOR THE PROJECT.
 3. ALL DIMENSIONS ARE IN FEET AND INCHES.



ANALYTICAL LABORATORY
 FLOOR PLAN 17-101

GENERAL NOTES:
 1. SEE ARCHITECT'S SPECIFICATIONS FOR THE PROJECT.
 2. THIS PLAN IS FOR INFORMATION ONLY. REFER TO THE CONTRACT DOCUMENTS FOR THE PROJECT.
 3. ALL DIMENSIONS ARE IN FEET AND INCHES.

FLOOR PLAN 17-101
 ANALYTICAL LABORATORY



APPROXIMATE LOCATIONS OF NON-RATED
 HEAD OF WALL JOINT SEAL
 REFER TO SUBCONTRACT DOCUMENTS
 FOR DETAILS AND ACTUAL LOCATIONS

FIGURE 1.1

GENERAL NOTES:

- 1. REFER TO THE GENERAL NOTES TO THE CONTRACT DOCUMENTS.
- 2. REFER TO THE GENERAL NOTES TO THE CONTRACT DOCUMENTS.
- 3. REFER TO THE GENERAL NOTES TO THE CONTRACT DOCUMENTS.
- 4. REFER TO THE GENERAL NOTES TO THE CONTRACT DOCUMENTS.

SCALE: AS SHOWN

APPROXIMATE LOCATIONS OF

NON-RATED

HEAD OF WALL JOINT SEAL

REFER TO SUBCONTRACT

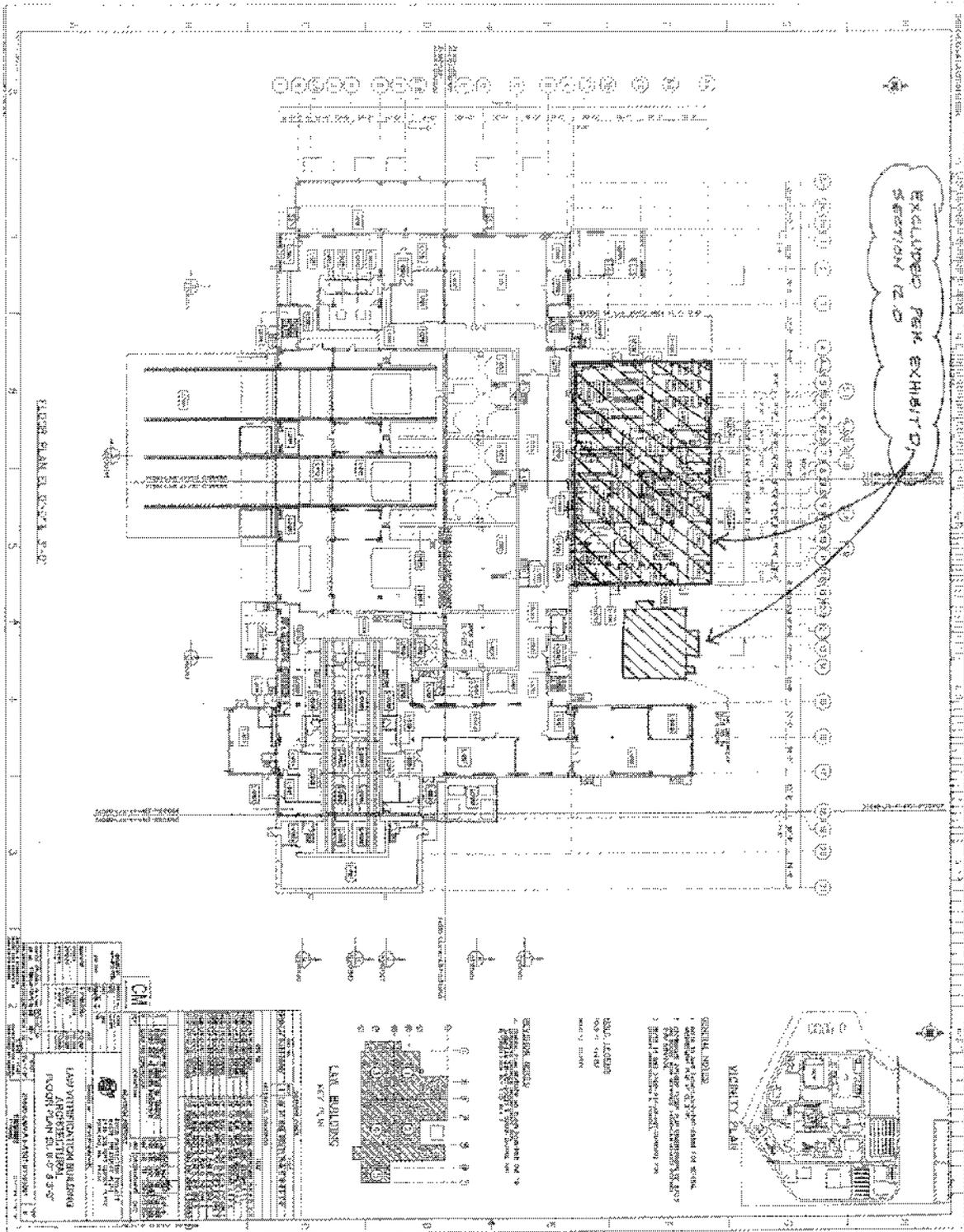
DOCUMENTS FOR DETAILS

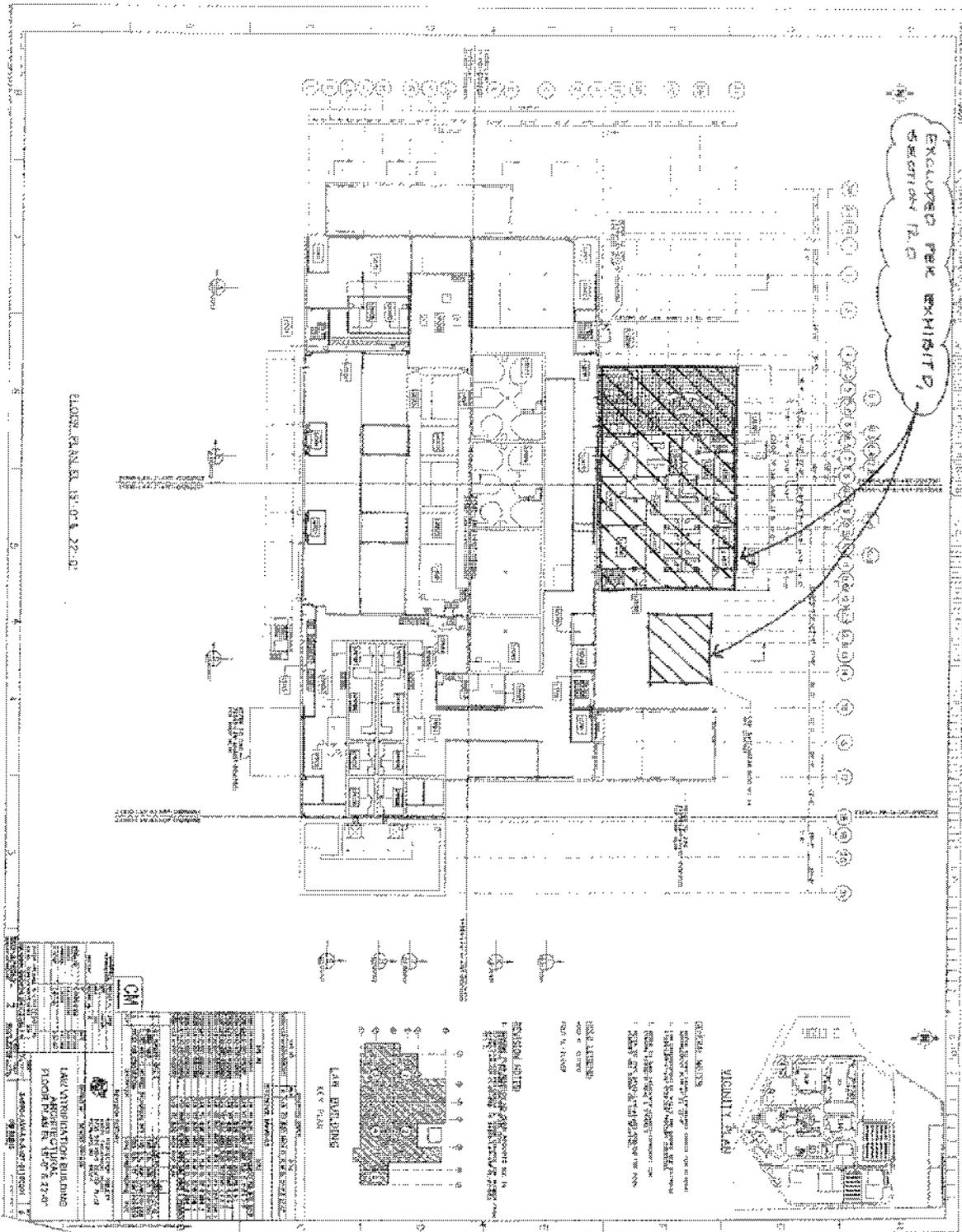
AND ACTUAL LOCATIONS

OF THE SEAL



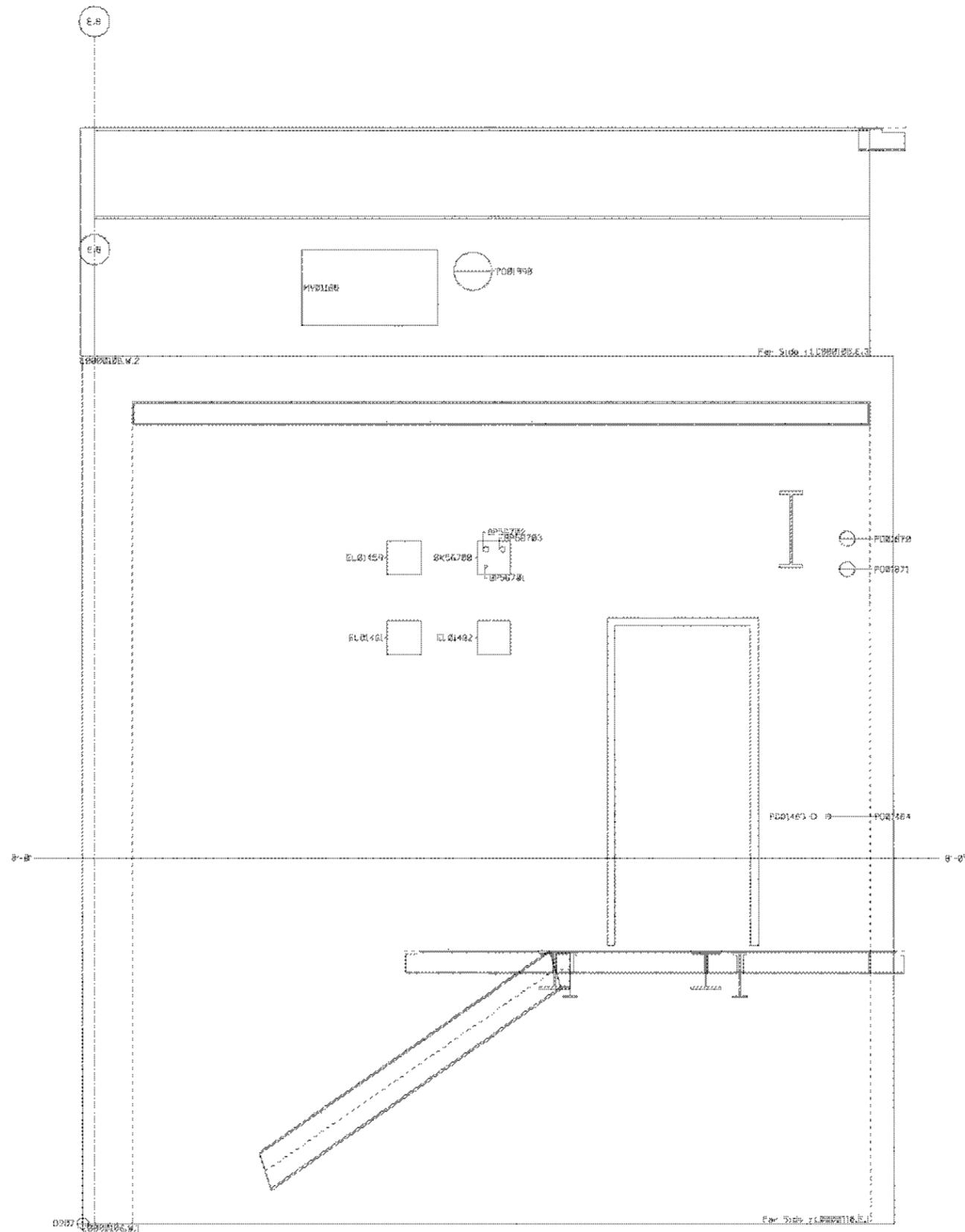
ATTACHMENT D-4 – LAW DEFINING WALL GRAPHIC (INFORMATION ONLY)







**ATTACHMENT D-5 – EXAMPLE MACRO GENERATED INFORMATION WALL ELEVATIONS
(INFORMATION ONLY)**



MECHANICAL PLAN
COND1166, W.2.4 - COND1166, E.3.1A

W - COND1166 Main COND. Pipe Rating MFL

NO.	FROM	TO	TYPE	SIZE	LENGTH	START ELEV.	END ELEV.	START STATION	END STATION	START X	START Y	END X	END Y
1	COND1166	COND1166	COND	1.50	11.72	14.50	14.50	0+00	11+72	0+00	0+00	11+72	0+00
2	COND1166	COND1166	COND	1.50	9.17	14.56	14.56	0+00	9+17	0+00	0+00	9+17	0+00
3	COND1166	COND1166	COND	1.50	12.13	14.53	14.53	0+00	12+13	0+00	0+00	12+13	0+00
4	COND1166	COND1166	COND	1.50	12.93	14.53	14.53	0+00	12+93	0+00	0+00	12+93	0+00
5	COND1166	COND1166	COND	1.50	9.92	14.52	14.52	0+00	9+92	0+00	0+00	9+92	0+00
6	COND1166	COND1166	COND	1.50	15.51	14.50	14.50	0+00	15+51	0+00	0+00	15+51	0+00
7	COND1166	COND1166	COND	1.50	14.48	14.48	14.48	0+00	14+48	0+00	0+00	14+48	0+00
8	COND1166	COND1166	COND	1.50	14.77	14.77	14.77	0+00	14+77	0+00	0+00	14+77	0+00
9	COND1166	COND1166	COND	1.50	14.77	14.77	14.77	0+00	14+77	0+00	0+00	14+77	0+00
10	COND1166	COND1166	COND	1.50	15.50	15.50	15.50	0+00	15+50	0+00	0+00	15+50	0+00
11	COND1166	COND1166	COND	1.50	13.43	13.43	13.43	0+00	13+43	0+00	0+00	13+43	0+00
12	COND1166	COND1166	COND	1.50	14.58	14.58	14.58	0+00	14+58	0+00	0+00	14+58	0+00

COND1166, W.2.4 - COND1166, E.3.1A



ATTACHMENT D-6 – PENETRATION SEALS EXPOSED TO R5 RADIATION LEVELS

Table A-1 Organics in General

Material	Lowest Reported Threshold (rads)	Property Changes
Polytetrafluoroethylene ("Teflon", TFE, PTFE, PFA, FEP), Note 1	Note 1	Elongation
Aliphatic polyamide ("Nylon")	8.7×10^4	Flex life
Cellulose	1×10^5	Tensile strength (increased)
Polyphenylene oxide	10^5	Tensile strength
Polyester resins (unfilled)	10^5 to 10^6	Elongation (most)
Fluoroelastomers	10^5 to 10^6	Compression set (most)
Polysulfide rubber ("Thiokol" ST)	2.9×10^5	Hardness
Cellulose propionate	3×10^5	Impact strength
Cellulose-filled phenolics	3×10^5	Hardness
Cellulose acetate butyrate	3.4×10^5	Elastic modulus
Polypropylene	Approx 3×10^5	Similar to polyethylene
Polyethylene ("HDPE")	3.8×10^5	Elongation increase
Polyacrylic rubber ("Hycar" PA-21)	4.7×10^5	Hardness
Cellulose nitrate	5×10^5	Elongation
PVC (plasticized)	5×10^5	Thermal resistance
Chlorosulfonated polyethylene	5×10^5	Elongation
Silicone elastomers	5×10^5	Oxidation resistance
Acetal resin	6×10^5	Tensile strength/elongation
Polycarbonate	7×10^5	Elongation
Acrylic resin (PMMA)	7×10^5	Tensile/elongation
Polymethyl alphachloroacrylate	7×10^5	Tensile/elongation
Butyl rubber	7×10^5	Tensile strength
Methyl methacrylate ("Lucite")	7.5×10^5	Tensile/elongation
Cellulose acetate	8×10^5	Tensile strength
Graphite-filled phenolic	8×10^5	Elongation
Neoprene	8×10^5	Compression set
Polyacrylonitrile (fiber)	1×10^6	Tensile strength
Propylene-ethylene polyallomer	1×10^6	Tensile/elongation
Polyacrylate elastomer	1×10^6	Set at break
Silicones	1×10^6	Tensile/elongation/hardness

Table A-1 Organics in General

Material	Lowest Reported Threshold (rads)	Property Changes
Ethylene propylene elastomer	1×10^6	Compression set
Butadiene rubber	1×10^6	Compression set
Nitrile rubber	1×10^6	Compression set
Urethane rubber	1×10^6	Compression set
Silicone rubber ("Silastic" 7-170)	1.2×10^6	Tensile/hardness/compression
Monochlorotrifluoroethylene (Fluorothene)	1.2×10^6	Modulus/shear
Polychlorotrifluoroethylene	1.2×10^6	Shear strength /elastic /modulus
Polyvinyl chloride acetate	1.4×10^6	Elongation
Ethyl cellulose	1.5×10^6	Impact strength
Styrene butadiene rubber	1.8×10^6	Compression set/elongation
Polychloroprene rubber (Neoprene W)	1.8×10^6	Not given
Vinyl pyridine rubber	2×10^6	Compression set
Natural rubber	2×10^6	Compression set
Ionomer resins	2×10^6	Tensile/elongation
Polyvinyl butyral	3×10^6	Tensile strength
Polyvinylidene chloride	3.7×10^6	Elongation
Vinyl vinylidene chloride ("Saran")	3.7×10^6	Elongation/impact
Casein resin	4×10^6	Impact strength
Polyethylene terephthalate	4.4×10^6	Tensile/elongation
Melamine formaldehyde (cellulose-filled)	6.7×10^6	Impact strength
Aromatic polyamides	7×10^6	Elongation
Urea formaldehyde	7.5×10^6	Tensile/Elongation
Polyvinylidene fluoride	8×10^6	Not given
UHMWPE	8.7×10^6	Not Given
Polyimide	1×10^7	Elongation/tensile
Polyvinyl fluoride	1×10^7	Elongation
Polyvinyl formal	1.6×10^7	Elastic modulus
Acrylonitrile butadiene	1×10^7	Tensile strength

Table A-1 Organics in General

Material	Lowest Reported Threshold (rads)		Property Changes
Polystyrene	2×10^7		Tensile strength
Polysulfone	5×10^7		Flex strength
Polyurethane resin	6×10^7		Tensile strength
Polyester resin (mineral- filled)	7.9×10^7		Elongation (most)
Polyvinyl carbazole	8×10^7		Impact strength
Pyrrone resin	1×10^8		Flexural strength
Ethylene Propylene Diene Monomer	1×10^8		Compression
Epoxy resin	2×10^8		Varies
TEFZEL	2×10^8		Not Given
Furan resin (asbestos and carbon black-filled)	3×10^8		Tensile/elongation
Phenol formaldehyde, asbestos filler ("Haveg 41")	3.5×10^8		Not given
Polyester glass laminate	4×10^8		Flexural strength
Silicone-asbestos laminate	6×10^8		Flexural strength
Polystyrene, white pigment filler ("Styron" 411-C)	7.3×10^8		Not given
PEEK	$1 \times 10^7 / 1 \times 10^9$		Initial damage noted/50% of damage
Asbestos phenolic laminate	1×10^9		Flexural strength
Glass-filled diallyl phthalate	1.8×10^9		Tensile strength/elongation
KAPTON	1×10^9		Not given
Vespel	7×10^9		Not given

Note 1. Dupont Teflon TFE is now more commonly called Teflon-PTFE and the material begins to show a minimal change in elongation at 1.5×10^4 rads. There are newer formulations of Teflon now available: Teflon-PFA and Teflon FEP. They have higher radiation resistance than Teflon PTFE as shown below. According to DuPont, 50% of original elongation is retained at the following radiation exposures when tested in air (oxygen accelerates damage): PTFE 5×10^5 rads; PFA 2×10^6 rads; FEP 5×10^6 Rads. NASA reported PTFE and FEP retained usable properties to 2×10^7 Rads in a vacuum and inert fluid.

Table A-2 Alphabetic Index for Elastomers by Popular Name

Popular Name	Chemical Designation	Trade Names
Acrylics	Polyacrylate	Acrylon Angus HR SH Hycar Lactaprene Paracil OHT Precision acrylics Thiacril Vyram
Butyl GRI	Isobutylene-isoprene	Bucar butyl Enjay butyl Hycar I. I. rubber Oppanol B Petro-Tex butyl Polysar butyl Precision butyl Vistanex MM
EPR	Ethylene propylene	Angus KR APK C 23 Dutral N Enjay EPR Nordel Olethene
EPDM	Ethylene Propylene Diene Monomer	None Identified
Fluoroelastomers	Vinylidene fluoride hexafluoropropylene	Angus VA SV Fluorel Precision fluoro Viton
	Fluoro-silicone silicone	Precision fluoro
	Trifluorochloro-ethylene vinylidene-fluoride	Silastic LS 53
Hypalon	Chlorosulfonated polyethylene	Angus HN Hypalon Precision hypalon

Table A-2 Alphabetical Index for Elastomers by Popular Name

Popular Name	Chemical Designation	Trade Names
Natural Rubber	Natural polyisoprene	Coral DRP Natsyn Okolite Shell isoprene Trans P.R.
Neoprene GRM	Chloroprene	Angus G Neoprene Okoprene Perbunan C Precision neoprene Sovprene U.S. rubber neoprene
Nitrile; Buna-N; G.R.A.; N.B.R.	Acrylonitrile-butadiene	Angus DS WR FR LR E P Butacril Butaprene Chemivic FR-N Herecrol Hycar OR Parker Nitrile Perbunan Polysar Krynao Precision Nitrile Royalite Tylac
Polybutadiene; Buna; S.K.A.	Butadiene	Ameripol CB BR rubber Budene Cisdene Diene Duradene Duragen Polysar tacketene S.K.B. Texus synpol EBR Trans 4 or cis 4

Table A-2 Alphabetical Index for Elastomers by Popular Name

Popular Name	Chemical Designation	Trade Names
Polyethylene; HDPE	Polyethylene	None indicated
Polyisoprene Synthetic	Synthetic polyisoprene	Ameripol SN Coral DPR Natsyn Philprene Shell IR Trans PIP Cariflex
Polyurethane	Diisocyanate-polyester or polyether	Adiprene Chemigum XSL Conathene Contilan Cyanoprene Desmodur Desmolin Disogrim Elastocast Elastolan Elastothane Estane Genthane Guidfoam Lamigom Mearthane Microvon Multrathane Pagulan Phoenolan Polyvon Precision urethane Solithane Texin Vorylen Vulcarprene Vulkollan

Table A-2 Alphabetic Index for Elastomers by Popular Name

Popular Name	Chemical Designation	Trade Names
SBR; Buna-S; GRS; SKB	Styrene-butadiene	Ameripol Angus R.G. ASRC Polymers Butaprene S Carbonix Cariflex Chemigum IV Copo Darex Duradene Flosbrene FR-S Gen-flow Gentro Hycar OS E TT Krylene Kryflex Navgapol Naugatex Philprene Plioflex Pliolite S Pliotuf Polysar S S Polymers Solprene Synpol Tylac
Silicone	Polysiloxane	Angus SIL SIS Arcosil Cohrlastic Fairprene General Electric SE HW Parker Silicone Rhodorsils RTV Silastene Silastic Union Carbide K.Y.

Table A-2 Alphabetical Index for Elastomers by Popular Name

Popular Name	Chemical Designation	Trade Names
Thiokol; GRP	Organic polysulfide	Alkyene polysulfide F.A. polysulfide rubber Perduren Precision Thiokol S.T. polysulfide rubber Thioplasts Vulcaplas
UHMWPE	Ultra High Molecular Weight Polyethylene	Dyneema, Spectra, TIVAR, Polystone-M
Vinylpyridine	Butadiene-2-methyl-5-vinyl pyridine	Philprene



ATTACHMENT D-7 – MATERIAL RADIATION DAMAGE THRESHOLD VALUES



ATTACHMENT D-8 – EXAMPLE JUSTIFICATION SUMMARY SHEET

JUSTIFICATION SUMMARY SHEET

SUBMITTAL NUMBER (Number provided by CONTRACTOR, entered by SUBCONTRACTOR)

PROPOSED DETAIL FOR:

(SUBCONTRACTOR to enter purpose of detail, for example "Tube Steel Penetration with open ends")

LOCATION:

(SUBCONTRACTOR to enter location of detail)

PROBLEM STATEMENT:

(SUBCONTRACTOR to enter problem, for example "Can not weld end cap at open end of a tube steel penetrating beyond the fire-rated wall due to interferences. Need detail for sealing end of tube steel to maintain the fire-rating.")

PROPOSED SOLUTION:

(SUBCONTRACTOR to enter proposed solution, for example "The attached Engineering Judgment from Vendor XYZ maintains the fire-rating by sealing the open ends of the tube steel as well as the annular space at the fire-rated wall.")

JUSTIFICATION:

(SUBCONTRACTOR to enter justification, for example "The proposed Engineering Judgment maintains the fire-rating of the wall penetrated by the open-ended tube steel.")

REFERENCES:

(SUBCONTRACTOR to enter references, for example:)

1. UL W-L-7186
2. UL W-L-1168
3. UL W-L-0016

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LAW and LAB Penetration Seals

I. DESCRIPTION OF EQUIPMENT OR SERVICES

This procurement action is to provide technical and professional services to engineer, furnish and install, and inspect penetration and joint seals; engineering for development of Engineering Judgments, new designs, testing and interpretations and analysis of test results, and supply of penetration and joint seal designs and material; coordination of shipping, transportation, delivery and temperature controlled storage of materials; supply construction supervision, labor, inspection, testing, Quality Verification Record Packages (QVRPs), documentation packages, equipment, motorized man lifts, tools, consumables and supplies, miscellaneous materials, and incidentals required for installations; overhead and profit, and all other costs, whether direct or indirect, required to complete the LAW/LAB Penetration and Joint Seals.

II. SUMMATION

It is recommended that Subcontract No. 24590-CM-FC1-AYFP-00001 in the amount of \$14,020,749.56 be awarded to Performance Contracting, Inc. d/b/a PCI Promatec as the low price offer in a competitive bidding environment.

III. CHRONOLOGICAL HISTORY OF THE SOLICITATION:

Information on background and history of solicitation.

- Date solicitation was issued: April 5, 2012
- Date proposals received: January 2, 2013
- Number of proposals received: Three
- Summarize proposals received:
 - A proposal was received from (b)(3):41 U.S.C 253 with an estimated value of (b)(3):41 U.S. to perform the services required in the scope of work. The Excluded Parties List Screening and the Restricted Parties List were searched on December 22, 2010 and no matches were found for submitted (b)(3):41 exceptions and assumptions to both the commercial and technical terms and U.S.C 253 conditions.
 - A proposal was received from Performance Contracting, Inc. d/b/a PCI Promatec (PCI) with an estimated value of to perform the services required in the scope of work. The Excluded Parties List Screening and the Restricted Parties List were searched on December 22, 2010 and no matches were found for PCI. PCI submitted exceptions and assumptions to both the commercial and technical terms and conditions. An alternate proposal was received from PCI with an estimated value of
 - A proposal was received from (b)(3):41 U.S.C 253 with an estimated value of (b)(3):41 U.S. to perform the services required in the scope of work. The Excluded Parties List Screening and the Restricted Parties List were searched on December 22, 2010 and no matches were found for (b)(3):41 U.S.C 253 submitted exceptions and assumptions to both the commercial and technical terms and conditions.

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- Provide name of the offerors and total prices of proposals:

Offeror	Proposals	Responsive/ Non-Responsive
(b)(3):41 U.S.C 253		Responsive
Performance Contracting, Inc. d/b/a PCI Promatec	(b)(4)	Responsive
(b)(3):41 U.S.C 253	(b)(3):41 U.S.C 253	Responsive
	NA	Non-Responsive – Declined

- Pre-qualification documentation was submitted to eighteen potential offerors. Eight potential offerors responded and completed the required pre-qualification documents. All eight of the potential offerors were found acceptable to participate in the solicitation by the technical representative, safety representative, and quality representative and were added to the final bidders list.
- A Pre-Proposal Conference was held at the WTP Construction Site on April 16, 2012 and four bidders attended the meeting. Several technical and commercial questions were asked and answered. The Pre-Proposal Conference documentation is located under file tab E.6.
- Any addenda to the solicitation:
 - Addendum 001 was issued on April 16, 2012 to revise the Offeror questions due date from May 4, 2012 to April 30, 2012 and extend the proposal due date from May 10, 2012 to May 17, 2012.
 - Addendum 002 was issued on April 26, 2012 to revise Exhibit "C," Quantities, Pricing, and Data to add the requirement for the offerors to provide a bid bond.
 - Addendum 003 was issued on May 2, 2012 to provide revised document 24590-WTP-GPP-SIND-023, extend the questions due date from April 30, 2012 to May 17, 2012, and extend the proposal due date from May 17, 2012 to May 31, 2012.
 - Addendum 004 was issued on May 5, 2012 to provide responses to offeror question and revise Exhibit "C," Quantities, Pricing, and Data and Exhibit "D," Scope of Work and Technical Requirements.
 - Addendum 005 was issued on May 22, 2012 to provide additional responses to offeror questions and update Exhibit "C," Quantities, Pricing, and Data.
 - Addendum 006 was issued on May 30, 2012 provide additional responses to offeror questions, update Exhibit "B," Special Conditions, and extend the proposal due date from May 31, 2012 to June 7, 2012.
 - Addendum 007 was issued on May 31, 2012 to provide final responses to offeror questions.
 - Addendum 008 was issued on December 6, 2012 to provide revised Exhibit "B," Special Conditions, Exhibit "C," Quantities, Pricing, and Data, Exhibit "D," Scope of Work and Technical Requirements, Exhibit "E," Technical Specifications, Exhibit "F," Drawings and extend the proposal due date from June 7, 2012 to December 13, 2012.

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- o Addendum 009 was issued on December 10, 2012 to provide LAB/LAW installation curves for information/bidding purposed only.
- o Addendum 010 was issued on December 12, 2012 to extend the proposal due date from December 13, 2012 to January 2, 2013.
- o Addendum 011 was issued on January 10, 2013 to provide revised Exhibit "D," Scope of Work and Technical Requirements and request a revised proposal by January 15, 2013 if the changes provided change the offerors proposal.
- o Addendum 012 was issued on January 16, 2013 to provide revised Exhibit "C," Quantities, Pricing, and Data, provide clarification on pay items for Engineering Judgment, Engineering Analysis, and Test and request a revised proposal by January 17, 2013 if the changes provided change the offerors proposal.
- o Addendum 013 was issued on February 5, 2013 to request a best and final offer be submitted by February 11, 2013.
- o Addendum 014 was issued on May 15, 2013 to provide revised Exhibit "B," Special Conditions, Exhibit "C," Quantities, Pricing, and Data, Exhibit "D," Scope of Work and Technical Requirements, Pen Seal Schedule and request a revised proposal by May 27, 2013.

The final proposals received from each offeror included all revised data provided under each addendum as required. The addenda and approval documentation are located under file tab E.5.

- Late proposals: After the negotiation phase was concluded and two rounds of proposal confirmation periods were provided, [redacted] discovered they submitted the final proposal with unit rate errors. [redacted] submitted a revised proposal after negotiations were closed and requested the revised proposal be considered. This revised proposal was considered a late proposal. As the Final Bid Confirmation forms were received from both bidders on or before the due date [redacted] revised proposal could not be considered.
- Small, HUBZone small, small disadvantaged or women-owned businesses: The socioeconomic status of the eight approved offerors is listed in the table below.

Offeror	Socioeconomic Status
(b)(3):41 U.S.C 253	Large
Performance Contracting, Inc. d/b/a PCI Promatec	Large
(b)(3):41 U.S.C 253	Large
	Large
	Large
	Small
	Large
	Large

Award made to a large business, the Small Business Program Subcontract Check-off List is located under file tab C.10.

IV. PROPOSAL EVALUATION

A. Technical Evaluation

Technical evaluations were performed by W. D. Loman, Subcontract Technical Representative (STR), and approved by C. Musick, Discipline Production Engineering Manager on January 27, 2013

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(b)(3):41
U.S.C 253

on the proposals submitted by PCI, and A summary of each offeror's technical proposal is as follows.

(b)(3):41
U.S.C 253

(b)(3):41 U.S.C 253

(b)(5)

(b)(5)

(b)(5)

Performance Contracting, Inc. d/b/a PCI Promatec

(b)(5)

(b)(5)

(b)(5)

(b)(3):41 U.S.C 253

(b)(5)

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(b)(5)

B. Commercial Evaluation

This solicitation was bid in a competitive environment and award is made on the lowest priced technically acceptable offer.

1. **Terms and Conditions:** Engineer, Procure, and Construct (EPC) terms and conditions were used for this solicitation. Exceptions were taken to both the General and Special Conditions. All exceptions were reviewed by BNI Legal Counsel and were resolved. Those of significance are noted below:

- Exhibit "A," General Conditions GC-21 Cooperation with Others. Request to delete last sentence and proposed a revision to include a revised sentence. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "A," General Conditions GC-23 Responsibility for Work Security and Property. Request to revise paragraph a. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "A," General Conditions GC-30 Expediting. Request to add an additional sentence. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "A," General Conditions GC-31 Excusable Delays. Request to revise the clause. BNI Legal counsel proposed revised language and PCI agreed.
- Exhibit "A," General Conditions GC-32 Changes. Request to revise clause. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "A," General Conditions GC-36 Indemnity. Request to revise clause. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "B," Special Conditions SC-4 Insurance. Request to add an additional sentence. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.
- Exhibit "B," Special Conditions SC-10 Commencement, Progress, and completion of the Work. Request to revise clause. BNI Legal counsel proposed revised language and PCI agreed.
- Exhibit "B," Special Conditions SC-22 Title and Risk of Loss. Request to clause. This revision was not acceptable to BNI Legal Counsel and PCI removed the exception.

2. **Payment Terms:** Net 30 days.

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- 3. Schedule Issues: No schedule issues were identified. PCI indicated their availability to perform work at WTP as required.
- 4. Representations and Certifications: The Representations, Certifications and Other Statements of Offerors document was signed by Mike Jordan, Estimator, dated June 7, 2012, and were reviewed and found to be acceptable. The Representations, Certifications and Other Statements of Offerors document is located under file tab D.1.

The Organizational Conflicts of Interest Representation or Disclosure document was completed and signed by Mike Jordan, Estimator, dated June 7, 2012 and can be found in file tab D.9. Subcontractor represented that no known conflicts of interest exist.

- 5. The Four Restricted Parties Lists (Denied Persons List, BIS Entity List, Unverified List, Office of Foreign Assets Control (OFAC), List of Specially Designated Nationals and Blocked Persons) and the List of Parties Excluded from Federal Procurement or Nonprocurement Programs: The BSI US Export & Import Compliance Website was searched on December 22, 2010 and on July 18, 2013 using Vastera and as of July 18, 2013 Performance Contracting, Inc. d/b/a PCI Promatec was not listed. The screening documentation is located under file tab F.3.6.

Procurement Representative's Signature: Deanne Owings Date: 7/31/13
Deanne Owings

- 6. Determination of Responsibility: PCI is considered responsible as defined in paragraphs a), b), c), d), e), f) and g) of FAR 9.104.1.

a) (b)(5)

b)

c)

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d) (b)(5)

e)

f)

g)

7. Proposal Expiration Date: No proposal expiration date was indicated on the proposal; therefore, the final proposal is valid through September 24, 2013.
8. Business Size and Type: Large Business
9. Subcontracting Plan: The Small Business Subcontracting Plan was reviewed by the Small Business Advocate on July 24, 2013 and found to meet the requirements provided in BNI procurement procedures and FAR Part 19. The Small Business Plan can be found in file tab C.1 and is also attached to Exhibit "B," Special Conditions.
10. Other Issues:

a. (b)(5)

b.

c.

d.

11. Cost Accounting Standards (CAS): Cost Accounting Standards (b)(5)
- (b)(5)

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V. PRICE ANALYSIS/COST ANALYSIS

A. BACKGROUND

In 2010, an Indefinite Delivery Indefinite Quantity subcontract utilizing firm fixed unit prices was determined by the formation team to be the appropriate approach for the LAW and LAB Penetration Seals Scope of Work. A Request for Proposal package was issued on April 5, 2012 and three offerors provided a proposal.

B. PROPOSAL

It was determined based on technical and commercial evaluations that two offerors provided acceptable proposals. The proposal submitted by [redacted] was found to be technically unacceptable and was removed from further evaluations. PCI and [redacted] were solicited on a competitive basis and price analysis was completed on each of the responsive offerors to determine if the proposed prices were within a fair and reasonable range. The total proposed value for each company is summarized in Table 1.

Table 1

Pay Item Categories	PCI	(b)(3):41 U.S.C
General – Firm Fixed Prices		
Mobilization	(b)(4)	(b)(3):41 U.S.C 253
Demobilization		
Performance and Payment Bonds		
Engineering Judgment		
Engineering Evaluation/Test		
Subtotal - General		
Penetration Seal Location Description		
GWB	(b)(4)	(b)(3):41 U.S.C 253
Concrete Wall or Ceiling		
Concrete Floor		
Shaft Wall		
Radiation		
Subtotal – Penetration Seals		
Total		

Under Addendum 008, dated December 6, 2012 a change to the scope of work was provided to the bidders and a revised proposal was requested to be submitted by December 13, 2012. The total revised value for each company is summarized in Table 2.

Table 2

Pay Item Categories	PCI	(b)(3):41 U.S.C 2
General – Firm Fixed Prices		
Mobilization	(b)(4)	(b)(3):41 U.S.C 253
Demobilization		
Performance and Payment Bonds		
Engineering Judgment		
Engineering Evaluation/Test		
Subtotal - General		

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Pay Item Categories	PCI	(b)(3):41 U.S.C
Penetration Seal Location Description		
GWB	(b)(4)	(b)(3):41 U.S.C 253
Concrete Wall or Ceiling		
Concrete Floor		
Shaft Wall		
Radiation		
Subtotal – Penetration Seals		
Total		

Addendum 011 was issued on January 10, 2013 to provide a revision to the scope of work. Revised proposals were requested due to the scope change; however, both bidders provided that the change did not affect their pricing. After a review of the proposed prices it was determined adequate price competition was achieved. Addendum 013 was issued to request Best and Final Offer from both bidders. The total revised value for each company is summarized in Table 3.

Table 3

Pay Item Categories	PCI	(b)(3):41 U.S.C 2
General – Firm Fixed Prices		
Mobilization	(b)(4)	(b)(3):41 U.S.C 253
Demobilization		
Performance and Payment Bonds		
Engineering Judgment		
Engineering Evaluation/Test		
Subtotal - General		
Penetration Seal Location Description		
GWB	(b)(4)	(b)(3):41 U.S.C 253
Concrete Wall or Ceiling		
Concrete Floor		
Shaft Wall		
Radiation		
Subtotal – Penetration Seals		
Total		

Addendum 014 was issued on May 15, 2013 to provide a revision to the scope of work. Revised proposals were requested due to the scope change. The total revised value for each company is summarized in Table 4.

Table 4

Pay Item Categories	PCI	(b)(3):41 U.S.C
General – Firm Fixed Prices		
Mobilization	(b)(4)	(b)(3):41 U.S.C 253
Demobilization		
Performance and Payment Bonds		
Engineering Judgment		
Engineering Evaluation/Test		
Upfront Core Engineering Team		

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Pay Item Categories	PCI	(b)(3):41 U.S.C 253
Subtotal - General	(b)(4)	
Penetration Seal Location Description		
GWB	(b)(4)	(b)(3):41 U.S.C 253
Concrete Wall or Ceiling		
Concrete Floor		
Shaft Wall		
Radiation		
Subtotal - Penetration Seals		
Total		

Additionally, this solicitation included a Time and Material section and a Rates for Changes Section and each bidder provided pricing as requested. A summary of this separate pricing is provided in Tables 5 and 6.

Table 5

Labor Category	Fully Burdened Fixed Hourly Rate
Insulator	(b)(3):41 U.S.C 253, (b)(4)
Certified Core Insulator	
Foreman Lead Man	
Material	
Material Handling Rate	
Rates for Changes Non-Manual	
Project Manager	(b)(3):41 U.S.C 253,(b) (4)
Safety Manager Professional	
QC Manager	
QC Inspector	
Project Engineer	
Superintendent	

(b)(3):41
U.S.C 253

(b)(3):41
U.S.C 253,
(b)(4)

Table 6

PCI		
Labor Category	Burdened Rate (with production work)	Fully Burdened Rate (without production work)
Insulator Apprentice 1	(b)(4)	
Insulator Apprentice 2		
Insulator Apprentice 3		
Insulator Apprentice 4		
Insulator Journeyman		
Insulator Foreman		
Insulator General Foreman		
Carpenter Apprentice 1		
Carpenter Apprentice 2		

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PCI		
Labor Category	Burdened Rate (with production work)	Fully Burdened Rate (without production work)
Carpenter Apprentice 3	(b)(4)	
Carpenter Apprentice 4		
Carpenter Journeyman		
Carpenter Foreman		
Carpenter General Foreman		
Material		
Material Handling Rate		(b)(4)
Rates for Changes Non-Manual		
Manager		(b)(4)
Superintendent		
Fire Protection Engineer		
Engineer		
Safety Supervisor		
QA Manager		
QC Inspector		
Drafter		
Clerk		
Administrator		
Additional Engineers		
Additional QC Inspectors		

After a review of the final proposals it was determined that both offerors understood the scope of work and what was expected to be priced. The FS compared the revised prices and found there was a 7% delta between the two proposals. The FS determined that adequate price competition was achieved and a competitive negotiation would be the most advantageous approach to obtain the best price for this work.

C. NEGOTIATION SUMMARY

As it was decided that a competitive negotiation would provide the best price the on-line auction tool – eSourcing – was utilized. Additional analysis of the proposals was conducted and it was found that the apparent low bidder did have several unit prices where they did not provide the lowest price. Therefore, it was decided to have each bidder bid on the individual line items and not a lot or the total overall price. The Time and Material, Material Handling and Rates for Changes were determined to be reasonable and would not be included in the negotiation.

It was discovered during the on-line negotiation set-up period that the system would not allow a quantity of 0, so a quantity of 1 was entered for every 0 quantity (each bidder was advised prior to the event that a quantity correction/reconciliation would occur after the auction). Prior to the live event several test events were conducted to ensure the line item strategy was the best approach. Based on further discussions, event tests, and other considerations listed below, it was determined to conduct the competitive negotiations through the eSourcing system.

- Each bidder was offered a Test Event dry run to ensure they understood how the system worked. PCI's Test Event was held on July 8, 2013 and [redacted] Test Event was held on July 9, 2013. (b)(3):41

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- Each bidder was provided an eight day pre-view session for all six events.
- Each bidder had the ability to export excel spreadsheets to perform analysis/negotiation strategies prior to the events.
- Each event only included the line items – no totals were included.
- Each bidder was able to see if they were in first or second place by pay item only.
- Each bidder provided their final excel spreadsheets exported from the system as back-up documentation to their final proposal.

The live eSourcing on-line bidding event took place on July 10, 2013. Each bidder provided revised prices for each of the six events. During the last event one bidder notified the FS that there appeared to be a quantity error and that this error affected pricing from events that had already closed. To ensure that all bidders were competing in a fair environment it was agreed by the Subcontract Manager, Subcontracts Supervisor, and both bidders to allow both bidders to download spreadsheets from each event and if the quantity error caused a price change allow the bidder to make the pricing correction. Then each bidder was instructed to submit their spreadsheets providing where the corrections occurred and a reason why the correction was needed for each price change, if applicable.

Each offeror provided their final prices for each penetration seal location. During a review of the final pricing it was discovered that there were other quantity errors. The FS made the quantity corrections on each spreadsheet and provided each bidder with corrected spreadsheets and a summary of the corrected final price. Each bidder was instructed to evaluate the new pricing and provide concurrence that the price was correct by signing a Final Bid Confirmation form. A Summary of the final prices is summarized in Table 7.

Table 7

Pay Item Categories	PCI	
General – Firm Fixed Prices		
Misc. (includes mobilization, demobilization, core engineering, etc.)	(b)(4)	(b)(3):41 U.S.C 253
GWB		
Concrete Wall or Ceiling		
Concrete Floor		
Shaft Wall		
Radiation		
Total	\$14,020,749.56	

(b)(3):41
U.S.C 253

(b)(3):41 U.S.C 253,(b)(4)
 (b)(3):41 U.S.C 253,(b)(4) PCI lowered their proposal from (b)(3):41 U.S. to (b)(3):41 U.S.C which is a reduction of (b)(3):41 U.S.C 253,(b) Additionally, PCI's final price is (b)(3):41 U.S.C 253,(b) lower than the original apparent low bidder price of (b)(3):41 U.S.C 2 As PCI provided the lowest price and was below the reserve price it was determined to award a subcontract to PCI in the amount of \$14,020,749.56 without further negotiations.

D. PRICE REASONABLENESS

To determine if the labor rates provided by PCI for non-production work (while other production work is being performed) are fair and reasonable the FS performed market research and compared fully burdened hourly rates with rates provided in competitively bid proposals received from the Low Activity Waste, Balance of Facilities, & Analytical Laboratory (LBL) Insulation and Heat Trace subcontract. A summary of the evaluation is provided below:

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Labor Category	PCI	LBL Insulation and Heat Trace Proposals	
		(b)(3):41 U.S.C 253	PCI
Insulator Apprentice 1	(b)(4)	(b)(3):41 U.S.C 253	(b)(4)
Insulator Apprentice 2		(b)(3):41 U.S.C 253	
Insulator Apprentice 3		(b)(3):41 U.S.C 253	
Insulator Apprentice 4		(b)(3):41 U.S.C 253	
Insulator Journeyman		(b)(3):41 U.S.C 253	
Insulator Foreman		(b)(3):41 U.S.C 253	
Insulator General Foreman		(b)(3):41 U.S.C 253	

(b)(5)

The fully burdened rates (to be used if no production work is being performed) were discovered to contain calculation errors. The correct rates are provided below.

Labor Category	Fully Burdened Hourly Rate
Insulator Apprentice 1	(b)(4)
Insulator Apprentice 2	(b)(4)
Insulator Apprentice 3	(b)(4)
Insulator Apprentice 4	(b)(4)
Insulator Journeyman	(b)(4)
Insulator Foreman	(b)(4)
Insulator General Foreman	(b)(4)

(b)(5)

(b)(5) Therefore it is determined that a final price of \$14,020,749.58 is determined to be fair and reasonable based on adequate price competition.

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VII. Certified Cost or Pricing Data

As the subcontract was competitively awarded the subcontractor is exempt from the requirements of Public Law 87-653. An executed Certificate of Current Cost or Pricing Data (CCCPD) was, therefore, not required.

VIII. SOURCE JUSTIFICATION

This solicitation was competitively bid. It was determined that more than one company was able to perform the services and the STR provided a list of possible offerors. The solicitation was sent to eight prospective bidders and three proposals were received. Two offerors were found to be technically and commercially acceptable. PCI submitted a proposal offering the lowest price and was determined to be financially responsible and capable of performing the work as described in Exhibit "D," Scope of Work and Technical Requirements. PCI is the responsive, responsible, lowest price, technically acceptable proposal received for this competitive solicitation; therefore, award is recommended to PCI.

IX. AVAILABILITY OF FUNDS

Authority is provided by approved Service Requisition/Purchase Memorandum (SR/PM) No. 24590-CM-SRA-AYFP-00001, Revision 4, dated July 16, 2013. The approved SR/PM is located under file tab C.9.

Policy 230 Commitment and Execution Authority is provided by approved Subcontract Commitment Authorization (SCA) No. 001 dated July 17, 2013. The approved SCA is located under file tab C.8.

Sufficient funds are available and approved in the amount of \$14,020,749.56 by Project Controls on SCA No. 001, dated July 17, 2013. The Subcontract Commitment Authorization is located in subcontract file tab C.8.

Advance Notification Letter: An advance notification letter was sent to the U. S. Department of Energy (DOE). The advance notification documentation is located in under file tab D.21.

X. FORM OF AGREEMENT

This is an Indefinite Delivery Indefinite Quantity utilizing Firm Fixed Unit Prices Subcontract.

XI. RECOMMENDATION

In consideration of the information presented herein, award of this procurement to Performance Contracting, inc. d/b/a PCI Promatec is determined to be in the best interest of the Contractor and the Government and is based on sound business judgment. Approval of this award is recommended.

Procurement Representative's
Signature

Deanne Owings
Deanne Owings

Date: 7/31/13

Supervisor's/Manager's Signature

Lori Baker
Lori Baker

Date: 8/5/13