

<b>INTERAGENCY AGREEMENT</b>		1. IAANO. NRC-HQ-20-17-T-0014		PAGE OF 1 2	
2. ORDER NO.		3. REQUISITION NO. NRR-17-0167		4. SOLICITATION NO.	
5. EFFECTIVE DATE 08/15/2017		6. AWARD DATE 08/15/2017		7. PERIOD OF PERFORMANCE 08/17/2017 TO 09/04/2017	
8. SERVICING AGENCY PACIFIC NORTHWEST NAT LAB ALC: DUNS: 000000000 +4: US DEPARTMENT OF ENERGY PACIFIC NORTHWEST SITE OFFICE PO BOX 350 MS K9-42 RICHLAND WA 99352  POC Genice Madera TELEPHONE NO. 509-372-4010			9. DELIVER TO BERNARD GRENIER US NUCLEAR REGULATORY COMMISSION ONE WHITE FLINT NORTH BUILDING 11555 ROCKVILLE PIKE MAIL STOP O-10C15 ROCKVILLE MD 20852		
10. REQUESTING AGENCY ACQUISITION MANAGEMENT DIVISION ALC: 31000001 DUNS: +4: US NUCLEAR REGULATORY COMMISSION ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE ROCKVILLE MD 20852-2738  POC MORIE GUNTER-HENDERSON TELEPHONE NO. 301 415-7924			11. INVOICE OFFICE US NUCLEAR REGULATORY COMMISSION ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE MAILSTOP O3-E17A ROCKVILLE MD 20852-2738		
12. ISSUING OFFICE US NRC - HQ ACQUISITION MANAGEMENT DIVISION MAIL STOP TWFN-8E06M WASHINGTON DC 20555-0001			13. LEGISLATIVE AUTHORITY Energy Reorganization Act of 1974		
			14. PROJECT ID		
			15. PROJECT TITLE ATTENDANCE AT GRAND GULF PRA F&O CLOSURE PROCESS M		
16. ACCOUNTING DATA 2017-X0200-FEEBASED-20-20D007-1028-11-4-151-253D-11-4-151-1028					
17. ITEM NO.	18. SUPPLIES/SERVICES	19. QUANTITY	20. UNIT	21. UNIT PRICE	22. AMOUNT
	NRC-HQ-20-17-T-0014  The NRC and Pacific Northwest National Laboratory (PNNL) hereby enter into this Agreement Task Order Number NRC-HQ-20-17-T-0014 for the project entitled "Attendance at the Grand Gulf PRA Facts and Observations (F&Os) Closure Process Meeting."  NRC COR: Bernard Grenier (301)415-2726 PNNL PM: Tara O'Neil (541)738-0362 PNNL PI: Steve Short (509)372-2868  Continued ....				
23. PAYMENT PROVISIONS			24. TOTAL AMOUNT \$17,213.00		
25a. SIGNATURE OF GOVERNMENT REPRESENTATIVE (SERVICING)			26a. SIGNATURE OF GOVERNMENT REPRESENTATIVE (REQUESTING) <i>Morie E. Gunter-Henderson</i>		
25b. NAME AND TITLE		25c. DATE	26b. CONTRACTING OFFICER		26c. DATE
			MORIE E. GUNTER-HENDERSON		8/15/2017

The period of performance of this project shall commence on August 17, 2017 and shall end on September 4, 2017. Notwithstanding the agreement effective dates and period of performance start dates stated elsewhere in the agreement, the effective date of the agreement and start date of the period of performance are the last date of signature by the parties.

Consideration and Obligations:

(a) Authorized Cost Ceiling \$17,213.00

(b) The amount presently obligated with respect to this DOE Agreement is \$17,213.00. When and if the amount(s) paid and payable to the DOE Laboratory hereunder shall equal the obligated amount, the DOE Laboratory shall not be obligated to continue performance of the work unless and until the NRC Contracting Officer shall increase the amount obligated with respect to this DOE Agreement. Any work undertaken by the DOE Laboratory in excess of the obligated amount specified above is done so at the DOE Laboratory's sole risk.

The following document is hereby made a part of this Agreement:

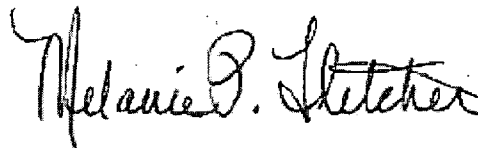
Attachment No. 1: Statement of Work

This agreement is entered into pursuant to the authority of the Energy Reorganization Act of 1974, as amended (42 U.S.C 5801 et seq.). This work will be performed in accordance with the NRC/DOE Memorandum of Understanding dated November 24, 1998. To the best of our knowledge, the work requested will not place the DOE and its contractor in direct competition with the domestic private sector.

- Fee Recoverable Work
- Non-fee Recoverable Work

DUNS: 040535809  
TAS: 31X0200.320  
ALC: 31000001  
Master IAA: NRCHQ2514D0001

## DEPARTMENT OF ENERGY- PNSO ACCEPTANCE

1. TO <b>NRC Office of Nuclear Reactor Regulation</b>		2. AGREEMENT NUMBER <b>NRCHQ2017T0014</b>		3. AMOUNT (as Listed on Agreement) <b>\$17,213.00</b>	
4. The Agreement identified above is accepted and the items requested will be provided as follows: (Check as Applicable)					
a. <input type="checkbox"/> ALL ITEMS WILL BE PROVIDED THROUGH REIMBURSEMENT (Category I) b. <input checked="" type="checkbox"/> ALL ITEMS WILL BE PROCURED BY THE DIRECT CITATION OF FUNDS (Category II) c. <input checked="" type="checkbox"/> ITEMS WILL BE PROVIDED BY BOTH CATEGORY I AND CATEGORY II AS INDICATED BELOW d. <input checked="" type="checkbox"/> THE ACCEPTANCE, FOR CATEGORY I ITEMS, IS QUALIFIED BECAUSE OF ANTICIPATED CONTINGENCIES AS TO FINAL PRICE. CHANGES IN THIS ACCEPTANCE FIGURE WILL BE FURNISHED PERIODICALLY UPON DETERMINATION OF DEFINITIZED PRICES, BUT PRIOR TO SUBMISSION OF BILLINGS.					
5. <input checked="" type="checkbox"/> AGREEMENT ITEM NUMBER(S) IDENTIFIED IN BLOCK 13, "REMARKS," IS NOT ACCEPTED (IS REJECTED) FOR THE REASONS INDICATED.					
6. TO BE PROVIDED THROUGH REIMBURSEMENT CATEGORY I			7. TO BE PROCURED BY DIRECT CITATION OF FUNDS CATEGORY II		
ITEM NO. a.	QUANTITY b.	ESTIMATED PRICE c. <b>\$17,213.00</b>	ITEM NO. a.	QUANTITY b.	ESTIMATED PRICE c.
d. TOTAL ESTIMATED PRICE		<b>\$17,213.00</b>	e. TOTAL ESTIMATED PRICE		
8. ANTICIPATED DATE OF OBLIGATION FOR CATEGORY II ITEMS			9. GRAND TOTAL ESTIMATED PRICE OF ALL ITEMS		
10. FUNDS DATA (Check if Applicable)					
a. <input checked="" type="checkbox"/> ADDITIONAL FUNDS IN THE AMOUNT OF \$ ARE REQUIRED (See justification in Block 13) b. <input checked="" type="checkbox"/> FUNDS IN THE AMOUNT OF \$ ARE NOT REQUIRED AND MAY BE WITHDRAWN					
11. REMARKS					
<p><b>Action authorized to support DOE Project No. 66419F</b></p> <p>Consistent with the Department of Energy's (DOE) full cost recovery policy, DOE collects, as part of its standard indirect cost rate, a Laboratory Directed Research and Development (LDRD) cost. Based on the amount of funds being accepted for this project, \$771 represents the estimated amount that will be used for LDRD efforts. The LDRD amount might be different than what was proposed due to the timing of the proposal and the function action due to a proposed accounting change that is awaiting DOE approval. DOE believes that LDRD efforts provide opportunities in research that are instrumental in promoting cutting-edge science capabilities. In addition, DOE believes these capabilities benefit all the customers at the laboratory. By providing funds to DOE to perform work, you acknowledge that such activities are consistent with appropriations acts that provide funds to you.</p>					
12. ACCEPTING ACTIVITY			13. TYPED NAME AND TITLE OF AUTHORIZED OFFICIAL		
<b>U.S. Department of Energy                  Pacific Northwest Site Office                  P.O. Box 350 (Mail Stop K9-42)                  Richland, WA 99352</b>			<b>Melanie P. Fletcher, Contracting Officer</b>		
			14. SIGNATURE		15. DATE
					<b>8/21/2017</b>

**STATEMENT OF WORK**

NRC Agreement Number  NRC-HQ-25-14-D-0001	NRC Agreement Modification Number	NRC Task Order Number (If Applicable)  NRC-HQ-20-17-T-0014	NRC Task Order Modification Number (If Applicable)  N/A
Project Title  Attendance at the Grand Gulf PRA Facts & Observations (F&Os) Closure Process Meeting			
Job Code Number  Cost Center 1028	B&R Number  11-4-151	DOE Laboratory  Pacific Northwest National Laboratory	
NRC Requisitioning Office  Nuclear Reactor Regulation (NRR), Division of Risk Assessment (DRA)			
NRC Form 187, Contract Security and Classification Requirements  <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable		<input checked="" type="checkbox"/> Involves Proprietary Information <input type="checkbox"/> Involves Sensitive Unclassified	
<input checked="" type="checkbox"/> Non Fee-Recoverable		<input type="checkbox"/> Fee-Recoverable (If checked, complete all applicable sections below)	
Docket Number (If Fee-Recoverable/Applicable)  N/A		Inspection Report Number (If Fee Recoverable/Applicable)  N/A	
Technical Assignment Control Number (If Fee-Recoverable/Applicable)  N/A		Technical Assignment Control Number Description (If Fee-Recoverable/Applicable)  N/A	

**1.0 BACKGROUND**

As part of the work undertaken by the industry and NRC's separate Risk Informed Steering Committees (RISCs), several high-priority issues relative to fostering an environment conducive to achieving the full benefit of risk-informed regulation were identified. A common theme in several of these issues was the difficulty associated with evaluation of Probabilistic Risk Assessment (PRA) technical adequacy in review of risk-informed licensing amendment requests (LARs). Technical adequacy is typically demonstrated in an LAR through, in part, a discussion of the results the PRA peer review process. As part of the PRA peer review process results, issues or problems that could impact the capability of the PRA are identified and documented using a Fact and Observation (F&O) form.

One of the high-priority issues identified by the RISCs is that the only currently accepted F&O closure path is the repeated use of the PRA peer review process which industry has reported is an additional cost and strain on limited PRA resources. Industry has proposed a new process

## 1.0 BACKGROUND (CONTINUED)

to allow closure of F&Os that purportedly address both the technical expertise required to close an F&O as well as the documentation required to support F&O closure. The new process was exercised by applying the process on the PRA results for one of the Exelon plants at Exelon headquarters in Kennett Square, PA, beginning on July 7, 2016. NRC Staff observed this application. The process is scheduled to be applied to another plant, Grand Gulf, at the Grand Gulf site located in Port Gibson, Mississippi in August, 2017. NRC Staff will also observe this application. Based on these (and possibly additional) exercise applications, the NRC Staff intends to work together with industry to develop a well-defined and documented alternative process to close peer review F&Os.

PNNL is the prime contractor supporting NRR/DRA in the area of probabilistic risk assessment, principally in the review of F&Os. They have been supporting DRA/PRA Licensing Branch for over five years in the review of NFPA 805, TSTF-505, TSTF-425 and 50.69 LARs; these reviews are on-going. They have recognized experts in the field. Accordingly, we need to obtain PNNL's expertise for them to provide insights into the PRA F&Os closure process.

## 2.0 OBJECTIVE

The objective of this task order is to obtain technical expertise from Pacific Northwest National Laboratory (PNNL) to assist the NRC staff in determining whether or not the newly developed PRA F&O closure process proposed by industry at Grand Gulf is viable and consistent with existing agency guidance.

## 3.0 SCOPE OF WORK

PNNL must provide all resources necessary to accomplish the tasks and deliverables described in this statement of work (SOW).

PNNL must attend a meeting as described in Section 4.0 "Specific Tasks" below and provide the staff with their insights on the new proposed PRA F&O closure process in a technical letter report (TLR).

## 4.0 SPECIFIC TASKS

PNNL must perform the following tasks:

### Tasks

Prepare for the trip by reviewing the proposed PRA F&Os closure process description. Travel to the meeting site in Port Gibson, Mississippi to attend a three-day meeting as an observer in order to gain knowledge and understanding of and insights into the new proposed PRA F&O closure process being demonstrated on the Grand Gulf nuclear generating station. Prepare a trip report (TLR) providing PNNL insights on the new proposed PRA F&O closure process. Participate in follow-up discussions with the staff.

### Completion Schedule

One week after the meeting.

## **5.0 DELIVERABLES AND/OR MILESTONES SCHEDULE**

See Section 4.0.

## **6.0 TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED**

One senior PRA specialists on a full-time basis, who is knowledgeable of U.S. nuclear power plant systems and operations and who possesses in-depth knowledge and is experienced in nuclear power plant probabilistic risk assessment.

## **7.0 MEETINGS AND TRAVEL**

One five-day, one-person trip to Port Gibson, Mississippi.

## **8.0 REPORTING REQUIREMENTS**

PNNL is responsible for structuring the deliverable to follow agency standards. The current agency standard is Microsoft Office Suite 2013. The current agency Portable Document Format (PDF) standard is Adobe Acrobat XI Professional. Deliverables must be submitted free of spelling and grammatical errors and conform to requirements stated in this section.

### Technical Reporting Requirements

NOTE: The transmittal letter and cover page shall contain the cost accountability code (CAC) number, the task order number, and title.

At the completion of work, submit a trip report which summarizes the experiences gained and any observations and recommendations resulting from the meeting.

## **9.0 PERIOD OF PERFORMANCE**

The period of performance is August 17, 2017 through September 4, 2017.

## **10.0 CONTRACTING OFFICER'S REPRESENTATIVE**

The COR monitors all technical aspects of the agreement/task order and assists in its administration. The COR is authorized to perform the following functions: assure that the PNNL performs the technical requirements of the agreement/task order; perform inspections necessary in connection with agreement/task order performance; maintain written and oral communications with PNNL concerning technical aspects of the agreement/task order; issue written interpretations of technical requirements, including Government drawings, designs, specifications; monitor PNNL's performance and notify PNNL of any deficiencies; coordinate availability of NRC-furnished material and/or GFP; and provide site entry of PNNL personnel.

COR: Bernard L. Grenier, [Bernard.Grenier@nrc.gov](mailto:Bernard.Grenier@nrc.gov), 301/415-2726  
Technical Reviewers: Harold Barrett

**11.0 MATERIALS REQUIRED**

N/A

**12.0 NRC-FURNISHED PROPERTY/MATERIALS**

The description of the proposed PRA F&Os closure process was provided to the PI under Task Order NRC-HQ-20-17-T-0001.

**13.0 RESEARCH QUALITY**

N/A

**14.0 STANDARDS FOR CONTRACTORS WHO PREPARE NUREG-SERIES  
MANUSCRIPTS**

N/A

**15.0 OTHER CONSIDERATIONS**

Assumptions and Understandings

None.

References

None.