

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 8

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

BPA NO.

1. DATE OF ORDER JUL 19 2007		2. CONTRACT NO. (if any) NRC-03-07-041		6. SHIP TO:	
3. ORDER NO. T002		4. REQUISITION/REFERENCE NO. NRC-03-07-041-002		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Jeffrey R. Mitchell, 301-415-6465 Mail Stop T-7-I-2 Washington, DC 20555				b. STREET ADDRESS Attn: Rachel Glaros Mail Stop: 05-H4 11555 Rockville Pike	
		7. TO:		c. CITY Rockville	d. STATE MD
a. NAME OF CONTRACTOR ENVIRONMENTAL MANAGEMENT SUPPORT INC E M S				e. ZIP CODE 20852	
b. COMPANY NAME ATTN: N. Jay Bassin				f. SHIP VIA	
c. STREET ADDRESS 8601 GEORGIA AVE STE 500				8. TYPE OF ORDER	
d. CITY SILVER SPRING		e. STATE MD	f. ZIP CODE 209103439	<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
9. ACCOUNTING AND APPROPRIATION DATA SEE BELOW IN BLOCK 17C. Transfer funds in the amount of \$10,000 from the base award. 720-15-111-113 J-4052 252A 31x0200.720 Obligate \$37,800				10. REQUISITIONING OFFICE NRR	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input checked="" type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. EMERGING SMALLBUSINESS <input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
a. INSPECTION		b. ACCEPTANCE		As Stated	
				16. DISCOUNT TERMS Net 30	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)																		
	<p>REFER TO THE ATTACHED DEFINITIZED ORDER FOR TASK ORDER NO. 002.</p> <p>ACCOUNTING AND APPROPRIATION DATA: Note: \$10,000 previously obligated as part of the minimum guarantee under the basic contract is to be allotted for Task Order No. 2 (ACCT transfer the funds)</p> <table><tr><td>720-15-111-113</td><td>J-4052</td><td>252A</td><td>31x0200.720</td><td>Transfer</td><td>\$10,000</td></tr><tr><td>720-15-111-113</td><td>J-4052</td><td>252A</td><td>31x0200.720</td><td>Obligate</td><td>\$37,800</td></tr><tr><td colspan="5">Total:</td><td>\$47,800</td></tr></table> <p>Contractor DUNS: 106741598</p>	720-15-111-113	J-4052	252A	31x0200.720	Transfer	\$10,000	720-15-111-113	J-4052	252A	31x0200.720	Obligate	\$37,800	Total:					\$47,800					
720-15-111-113	J-4052	252A	31x0200.720	Transfer	\$10,000																			
720-15-111-113	J-4052	252A	31x0200.720	Obligate	\$37,800																			
Total:					\$47,800																			
SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.																			
	21. MAIL INVOICE TO:					17(h) TOTAL (Cont. pages)																		
	a. NAME U.S. Nuclear Regulatory Commission Payment Team, Mail Stop T-7-I-2																							
	b. STREET ADDRESS (or P.O. Box) Attn: (NRC-03-07-041 Task Order No. 002)					17(i). GRAND TOTAL																		
	c. CITY Washington		d. STATE DC	e. ZIP CODE 20555																				

In accordance with Section G.4, Task Order Procedures, of contract no. NRC-03-07-041 this definitizes Task Order No. 002. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No. 002 shall be in effect from the Day of Award through July 31, 2008, with a cost ceiling of \$47,865.00. The amount of \$45,049.00 represents the estimated reimbursable costs, and the amount of \$2,816.00 represents the fixed fee.

The amount currently obligated by the Government with respect to this contract is \$47,800.00 of which the sum of \$44,988.25 represents the estimated reimbursable costs, and \$2,811.75 represents the fixed fee.

The issuance of this task order does not amend any terms or conditions of the subject contract.

Your contacts during the course of this task order are:

Technical Matter:	Rachel Glaros Project Officer 301-415-3672	John Burke Technical Monitor 301-415-1529
Contractual Matters:	Jeffrey R. Mitchell Contract Specialist 301-415-6465	

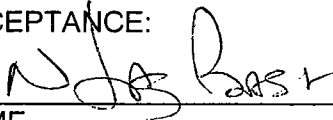
Acceptance of Task Order No. 002 should be made by having an official, authorized to bind your organization, execute three copies of this document in the space provided and return two copies to the Contract Specialist at the address identified in Block No. 5 of the OF 347. You should retain the third copy for your records.

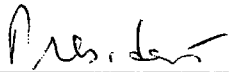
ACCEPTANCE:

NAME

TITLE

DATE





7/23/07

RECEIVING REPORT

SHIPMENT NUMBER	PARTIAL		DATE RECEIVED	SIGNATURE OF AUTHORIZED U.S. GOV'T REP.	DATE
	FINAL				
TOTAL CONTAINERS		GROSS WEIGHT	RECEIVED AT	TITLE	

REPORT OF REJECTIONS

OPTIONAL FORM 347 (REV. 4/2006) BACK

TASK ORDER TERMS AND CONDITIONS

NOT SPECIFIED IN THE CONTRACT

A.1 NRC Acquisition Clauses - (NRCAR) 48 CFR Ch. 20

A.2 Other Applicable Clauses

☐ See Addendum for the following in full text (if checked)

☐ 52.216-18, Ordering

☐ 52.216-19, Order Limitations

☐ 52.216-22, Indefinite Quantity

☐ 52.217-6, Option for Increased Quantity

☐ 52.217-7, Option for Increased Quantity Separately Priced Line Item

☐ 52.217-8, Option to Extend Services

☐ 52.217-9, Option to Extend the Term of the Contract

A.3 SEAT BELTS

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.

**STATEMENT OF WORK
FOR TASK ORDER NO. 2 UNDER
NRC-03-07-041, JCN J-4052**

"Evaluation of General Industry Chemical Effects Testing that Support Chemical Effects Evaluations to be Submitted to the NRC in Response to Resolving Generic Safety Issue (GSI) 191"

1. BACKGROUND

The Nuclear Regulatory Commission (NRC) established Generic Safety Issue (GSI) 191 in September 1996 to determine whether the transport and accumulation of debris in Pressurized Water Reactor (PWR) containment following a loss-of-coolant accident (LOCA) could impede the operation of any PWR's emergency core cooling system (ECCS) or containment spray system (CSS). To resolve NRC GSI-191, "Pressurized Water Reactor Emergency Recirculation Sump Performance," the NRC issued Generic Letter (GL) 2004-02 in September 2004 outlining schedules for licensees to complete PWR sump performance evaluations and necessary sump modifications and procedure changes. The NRC requested licensees to complete and submit evaluations to the NRC and complete sump modifications, if necessary, by the end of December 2007. The NRC has granted extensions beyond 2007 for the completion of some activities for some licensees. The PWR sump performance methodology (NEI Guidance Report as supplemented by the NRC staff safety evaluation) requires the evaluation of chemical effects, including the potential consequences on head loss across the sump strainer, on a plant-specific basis.

Licensees are performing plant specific strainer performance tests that include simulated chemical products that may be based on the WCAP-16530-NP chemical model, to evaluate their affect on pressure drop across a debris-covered screen or strainer segment surface. Licensee's plant-specific chemical effects evaluations are expected to demonstrate that any chemical products formed do not result in either unacceptable head loss across the strainer surface or unacceptable degradation of downstream components. NRC staff will be reviewing licensee chemical effects evaluations as part of the GL 2004-02 review to support resolution of GSI-191.

The PWR Owners Group submitted, WCAP-16530-NP Revision 0, "Evaluation of Post-Accident Chemical Effects in containment Sump Fluids to Support GSI-191." that is currently being reviewed by NRC staff. This WCAP contains a chemical model that predicts the amount of chemical precipitate that will be generated based on plant specific inputs. During the NRC review of the WCAP, NRC Staff developed 58 Requests for Additional Information (RAIs) that were provided to the PWR Owners Group. The PWR Owners Group has submitted the responses to the NRC RAIs. In addition, the PWR Owner's Group has conducted follow-on tests intended to provide a basis for re-evaluating conservative assumptions in the WCAP-16530-NP chemical model.

2. OBJECTIVE

The objective of this task order is to obtain the technical expertise to assist the NRC staff in evaluating general industry GSI-191 chemical effects testing in order to determine the adequacy of the test method and/or test data interpretation, and reviewing responses to RAls developed by NRC staff on topical report WCAP-16530-NP in order to determine if the issues raised in the RAls have been adequately addressed.

3. SCOPE OF WORK

Task 1 **Evaluation of Technical/Topical Reports containing General Industry Chemical Effects Testing**

(a) EMS shall review topical reports and other technical reports that contain general industry chemical effects testing that support industry chemical effects evaluations being prepared in response to resolving GSI-191 (i.e. strainer vendor test protocols and corrosion tests). In particular, EMS shall review up to a total of 8 topical/technical reports as identified below. NRC expects to provide reports to EMS on a staggered basis. The time-frame the reports are to be provided to the contractor by the NRC Technical Monitor (TM) are for estimating purposes only. The actual review schedule will depend upon the dates material is submitted to the NRC and test start dates.

- Reports for five strainer vendor test protocols:
 - o General Electric (to be provided in September 2007)
 - o AECL, (to be provided in August 2007)
 - o Alion Science & Technology (to be provided at task order award)
 - o CCI Inc./Nietec, (to be provided at task order award)
 - o AREVA/PCI. (to be provided in July 2007)
- Duke Energy corrosion tests report of aluminum in various environments, that contains results having generic implications for industry (to be provided in July 2007)
- Up to two additional generic industry chemical effects test reports. (Estimated to be provided in the November 2007 to January 2008 time frame.)

EMS shall evaluate the appropriateness of the test protocol, and if included in the report, the adequacy of the test data interpretation. EMS shall assess the conservatism of the test method and data interpretation. EMS shall develop questions (RAls) to address areas needing clarification or potential deficiencies regarding the test approach and test results.

EMS shall prepare a draft technical letter report due three weeks after receipt of the report that includes a summary of the test method; a recommendation on the acceptability or non-acceptability of the test methods and data interpretation with supporting bases for the recommendations, and questions. EMS shall prepare a final technical letter report that incorporates any NRC comments due one week after receipt of comments.

The contractor shall prepare for and travel to NRC Headquarters in Rockville, MD as

needed to participate (e.g. support NRC staff in addressing questions) in a public or ACRS meeting related to EMS's evaluation of the topical/technical reports mentioned above.

- (b) EMS shall review the PWR Owners Group response to NRC staff RAIs on topical report WCAP-16530-NP to determine if they adequately address the issue. The RAI responses will be provided to EMS by the TM in order to prepare a proposal. EMS shall prepare a draft technical letter report three weeks after award of task order that identifies potential deficiencies in the RAI response and recommends any additional information that would be helpful to resolve the RAIs. EMS shall prepare a final technical letter report that incorporates any NRC comments due one week after receipt of comments.

Task 2 Evaluation of Chemical Effects Testing Occurring at a Strainer Vendor Test Facility

EMS shall accompany NRC staff to a strainer vendor test facility to evaluate the chemical effects testing being performed. Typical test durations are one day. Using the knowledge of the test protocol gained in Task 1, along with overall chemistry expertise and understanding of GSI-191 chemical effects, EMS shall observe the chemical effects tests and provide an assessment of the adequacy of the testing. The assessment shall include perceived strengths and weaknesses in the test techniques.

EMS shall provide a trip report due one week after completion of the trip that documents the evaluation of the observed testing.

4. REPORTING REQUIREMENTS

NOTE: All reports are to be submitted to the Technical Monitor electronically with a copy provided to the Project Officer. These reports shall be prepared in WordPerfect X3 or compatible format. The transmittal letter and cover page shall contain the job code number (JCN), contract number, the task order number, title and NRC technical assignment control (TAC) number(s). Care should be taken to avoid the inclusion of any proprietary information in reports, if possible, with all necessary proprietary information clearly identified in the reports.

Task 1a Draft Technical Letter Reports (One for each topical/technical report evaluated)

Due: Three weeks after receipt of Topical/Technical Report

Final Technical Letter Reports (One for each topical/technical report evaluated)

Due: One week after receipt of NRC comments

Task 1b Draft Technical Letter containing evaluation of RAI Responses to

WCAP-16530-NP

Due: Three weeks after award of task order

Final Technical Letter containing evaluation of RAI Responses to
WCAP- 16530-NP

Due: One week after receipt of NRC comments

Task 2 Trip Report containing an evaluation of the chemical effects testing observed
Due: One week after the trip

5. MEETINGS AND TRAVEL

Task 1

One-person, three-day trip for a two-day public or ACRS meeting at NRC Headquarters in Rockville, MD

Task 2

One, one-person, two day trip to a vendor strainer test facility in the Northeast United States for one day of testing observation.

6. PERIOD OF PERFORMANCE

The period of performance for this task order shall be from award of the order through July 31, 2008.

7. NRC-FURNISHED MATERIALS

The NRC will supply all documentation needed to perform the reviews described in Task 1. Either a hard copy or electronic copy of document(s) will be provided to EMS by the TM at the start of the review period for that document. The documents may contain proprietary information and must be handled as proprietary information that must not be discussed or made available to any person other than the NRC staff or NRC contractors as authorized by the TM.

8. OTHER APPLICABLE INFORMATION

License Fee Recovery

The work to be performed under this task order is not licensee fee recoverable.