

# ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES  
1 6

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

BPA NO. DR-03-06-046

1. DATE OF ORDER <b>AUG 16 2006</b>		2. CONTRACT NO. (If any) GS23F0113L		6. SHIP TO:	
3. ORDER NO. T001		MODIFICATION NO.		4. REQUISITION/REFERENCE NO. NRC-03-06-046	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div of Contracts Two White Flint North - MS T-7-1-2 Attn: Jennifer A. DeFino, (301) 415-6714 Washington, DC 20555				a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
				b. STREET ADDRESS	
				c. CITY Washington	d. STATE DC
				e. ZIP CODE 20555	
7. TO:				f. SHIP VIA	
a. NAME OF CONTRACTOR ARES CORPORATION				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 1440 CHAPIN AVE STE 390				Reference your Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated. Except for billing instructions on the reverse, this delivery/task order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY BURLINGAME		e. STATE CA		f. ZIP CODE 940104058	
9. ACCOUNTING AND APPROPRIATION DATA B&R: 620-15-111-104 Job Code: J-3304 BOC: 252A Apprn. No. 31X0200.620 Obligate: \$27,613.57 Contractor DUNS No. 807721980				10. REQUISITIONING OFFICE NRR	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT N/A	
<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 SMALL BUSINESS <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		16. DISCOUNT TERMS N/A	

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)
	ISSUANCE OF TASK ORDER NO. 001  TITLE: TECHNICAL ASSISTANCE IN SUPPORT OF THE RESOLUTION OF GENERIC SAFETY ISSUE (GSI) 191 FOR SAN ONOFRE  TOTAL ESTIMATED COST: \$27,613.57  PERIOD OF PERFORMANCE: 08/06/2006 - 10/06/2006   CONTRACTOR SIGNATURE REQUIRED ON PAGE 2 OF 2					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		\$27,613.57	17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:							
	a. NAME U.S. Nuclear Regulatory Commission Division of Contracts						\$27,613.57	17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) Mail Stop: T-7-1-2 ATTN: DR-03-06-046							
c. CITY Washington		d. STATE DC	e. ZIP CODE 20555					

2. UNITED STATES OF AMERICA  
BY (Signature)

*Donald A. King*

23. NAME (Typed)  
Donald A. King  
Contracting Officer  
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION  
REVIEWED BY: ADM001

SUNSI REVIEW COMPLETE

OPTIONAL FORM 347 (REV. 3/2005)  
PRESCRIBED BY GSA FPMR (41 CFR) 53.213(e)

ADM002

This confirms verbal authorization that was provided to ARES Corporation on 08/02/2006, to begin work under Task Order No. 001, effective 08/06/2006, with a temporary ceiling of \$13,806.79.

In accordance with Section A.10, Task Order Procedures, of blanket purchase agreement (BPA) number DR-03-06-046, this definitizes Task Order No. 001. The effort shall be performed in accordance with the enclosed Statement of Work.

Task Order No. 001 shall be in effect from 08/06/2006 through 10/06/2006, with a cost ceiling of \$27,613.57.

The following individual is considered to be essential to the successful performance for work hereunder: [REDACTED]  
[REDACTED] The Contractor agrees that such personnel shall not be removed from the effort under the task order without compliance with Contract Clause A.8, Key Personnel.

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

Your contacts during the course of this task order are:

Technical Matters: Bernard Grenier  
Project Officer  
(301) 415-2726

Contractual Matters: Jennifer DeFino  
Contract Specialist  
(301) 415-6714

Acceptance of Task Order No. 001 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. You should retain the third copy for your records.

ACCEPTED: Task Order No. 001

Kathryn Naassan KATHRYN NAASSAN  
NAME

VICE PRESIDENT  
TITLE

8/22/06  
DATE

Statement of Work for Task Order 1 (JCN J-3304)  
under Contract No. DR-03-06-046

Title: Evaluation of the Technical Adequacy of New PWR Sump Design of the San Onofre  
Response to Generic Letter (GL) 2004-02

Technical Monitor: Leon E. Whitney, office: 301/415-2869; cell 240-483-2285; E-mail:  
LEW1@NRC.GOV

TAC Number: MC4715/MC4714

BACKGROUND

In June, 2003, the NRC identified Generic Safety Issue (GSI)-191, involving the potential for clogging of recirculation sump screens in pressurized water reactors (PWRs). Based on the findings of the GSI-191 ("Assessment of Debris Accumulation on PWR Sump Performance") study conducted by the NRC Office of Nuclear Regulatory Research on ECCS suction/containment sump clogging in PWRs, the NRC staff issued a Safety Evaluation (SE) and Generic Letter (GL) 2004-02 pertaining to the PWR sump design guideline report developed by the Nuclear Energy Institute (NEI) in conjunction with the PWR Owners group. Through this GL and using the guidance approved by the SE, licensees are requested to proceed to resolve the GSI-191 issue for each PWR plant. The NRC staff, through audit of licensees' responses to GL-2004-02, is reviewing implementation of the GL, specifically of the new sump designs in accordance with NRC requirements.

NRC staff has decided to audit the San Onofre Nuclear Power Station to verify and confirm that their new sump strainer performance is in compliance with the 10 CFR 50.46.

OBJECTIVE

The objective of this task order is to obtain engineering expertise from ARES Corporation to assist the staff in determining the technical adequacy of the GSI-191 Sump Clogging Issue analysis of the San Onofre Nuclear Power Plant.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

One senior level mechanical engineer with extensive experience on PWR LOCA analyses and containment analysis. This includes areas such as LOCA break selection, debris generation, debris characteristics, debris transport (including the emerging area of sump and containment pool "near-field effect"), recirculation water hold-up volumes, strainer design and performance, strainer head-loss and vortexing, and ECCS and containment spray pump net-positive suction head (NPSH).

## WORK REQUIREMENTS

### Tasks

### Completion Schedule

1. Based on the guidance in the NRC Safety Evaluation Report for GSI-191 and NRC Regulatory Guide 1.82, Revision 3, review San Onofre's proposed design based on the available documents and identify deficiencies and the need for additional or clarifying information to be obtained from the licensee. Discuss the results by telephone with the Technical Monitor and provide a short summary in the MBLR.
2. Travel to the San Onofre Nuclear Generating Station (currently planned first day onsite is August 7, 2006) to assist the NRC in the conduct of an audit of the new San Onofre strainer design in the areas of ECCS and containment spray recirculation and associated analyses. Based on NRC guidance documents referenced above, and any further review guidance provided by the NRC, and information gathered during the audit from the licensee or its contractors or vendors, prepare a technical letter report.

August 4, 2006

a. Draft.

Within two weeks of the end of trip.

b. Incorporate NRC comments and prepare the final report.

Within one week of receipt of NRC comments.

### LEVEL OF EFFORT

The estimated level of effort in professional staff days apportioned among the tasks are as follows:

<u>Tasks</u>	<u>Level of Effort (days)</u>
1.	2.0
2.	<u>16.0</u>
Total	18.0

### PERIOD OF PERFORMANCE

The projected period of performance is two months from authorization of work.

### DELIVERABLES

#### Technical Reporting Requirements

NOTE: All reports are to be submitted electronically using WordPerfect 10.0 (Font Arial regular 11 point) or compatible software program to the Technical Monitor with a copy provided to the Project Officer. In all correspondence, include the following information: JCN No., Task No., the applicant, the facility, TAC No., and NRC/NRR Branch: Safety Issue Resolution Branch (SSIB).

## DELIVERABLES (CONTINUED)

### Technical Reporting Requirements

1. At the completion of Task 1., inform the Technical Monitor via telephone of any need for additional information, any specific technical areas to be targeted during the audit, and the basis or bases for these technical opinion(s). Provide a summary in the Monthly Business Letter Report.
2. At the completion of Task 2., submit a technical letter report, draft and final as appropriate, that contains a detailed technical adequacy evaluation of the licensee's new ECCS, containment spray, sump and strainer design (Generic Letter 2004-02 corrective actions), including the bases for the conclusions. Provide a list of any outstanding issues ("open items") with the basis or bases clearly articulated, including the significance of these outstanding issues relative to a conclusion of licensee GL 2004-02 corrective action adequacy.

### MEETINGS AND TRAVEL

One one-person, six-day trip to the San Onofre reactor site located near San Clemente, CA.

### NRC-FURNISHED MATERIALS

The NRC Safety Evaluation Report, "GSI-191 SE, Revision 0, "Pressurized Water Reactor Containment Sump Evaluation Methodology" dated December 6, 2004, and GL-2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 13, 2004, can be found at the following web site:

<http://www.nrc.gov/reactors/operating/ops-experience/pwr-sump-performance.html>

The licensee's submittal (on CD) will be overnight mailed to the ARES Project Manager upon authorization of this task order.

**NOTE: This document contains proprietary information and they must be safeguarded against unauthorized disclosure. After completion of work, the document(s) should either be destroyed or returned to NRC. If they are destroyed, please confirm this in an E-mail to the Technical Monitor with a copy to the Project Officer and include the date and manner in which the document(s) was destroyed.**

### OTHER APPLICABLE INFORMATION

#### License Fee Recovery

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

OTHER APPLICABLE INFORMATION (CONTINUED)Assumptions and Understandings

The level of effort assumption for Task 1 is based on a contractor cursory review of the licensee submitted documentation as well as the scope of the work as described above.

The level of effort assumption for Task 2 is based on one day for travel to the site, five days for the audit and return trip from the site, seven days for completion of the evaluation and report writing, and three days to resolve NRC comments.