ORDER FOR SUPPLIES OR SERVICES

~~NRC-HQ-11-C-04-0044~~ ~~NRC-HQ-11-T-04-0001~~

PAGE 1 OF PAGES 2

IMPORTANT: Mark all packages and papers with contract and/or order numbers. BPA NO.

1. DATE OF ORDER 9/22/2011	2. CONTRACT NO. (If any) NRC-HQ-11-C-04-0044
3. ORDER NO. NRC-HQ-11-T-04-0001 MODIFICATION NO.	4. REQUISITION/REFERENCE NO. RES-11-211 113831

5. ISSUING OFFICE (Address correspondence to)
U.S. Nuclear Regulatory Commission
Div. of Contracts
Attn: Jeffrey R. Mitchell; 301-492-3639
Mail Stop: TWB-01-B10M
Washington, DC 20555

6. SHIP TO:
a. NAME OF CONSIGNEE: U.S. Nuclear Regulatory Commission
b. STREET ADDRESS: Attn: Annie Ramirez
Mail Stop: CSB-3A07M
11545 Rockville Pike
c. CITY: Rockville | d. STATE: MD | e. ZIP CODE: 20555

7. TO:
a. NAME OF CONTRACTOR: ENERGY RESEARCH, INC.
b. COMPANY NAME: ATTN: TRACEY MULLINIX
c. STREET ADDRESS: 6167 EXECUTIVE BLVD.
d. CITY: ROCKVILLE | e. STATE: MD | f. ZIP CODE: 208523901

f. SHIP VIA

8. TYPE OF ORDER
[ ] a. PURCHASE — 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.
[X] b. DELIVERY — Except for billing instructions on the reverse, this delivery 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.

9. ACCOUNTING AND APPROPRIATION DATA $250,000.00
2011-60-17-6-100 V6020 252A 31x0200.160 Ob $150,000.00
Move $100,000 from base agreement under JCN N6749 to Task 1 under JCN J6268. Total Obligations is $250,000.00 (**)

10. REQUISITIONING OFFICE: RES

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[X] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] d. WOMEN-OWNED [ ] e. HUBZone
[ ] f. SERVICE-DISABLED VETERAN-OWNED [ ] g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM [ ] h. ECONOMICALLY DISADVANTAGED WOMEN-OWNED SMALL BUSINESS (EDWOSB)

12. F.O.B. POINT: N/A

13. PLACE OF a. INSPECTION	13. PLACE OF b. ACCEPTANCE	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS

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)
	In accordance with Section G.4 entitled "Task Order Procedures" of the subject contract, this order definitizes Task Order No. 1. This effort shall be performed in accordance with the enclosed Statement of work. Task Order No. 1 entitled "Development, Verification and Documentation of ABWR TRACE Models with SVEA-96 Optima 2 Fuel" The issuance of this task order does not amend any other terms or conditions of the subject contract. Contractor Acceptance on Page 2 of 2 (**) Contractor DUNS: 621211259 NAICS: 541330 FAMIS: 113831					

18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	

21. MAIL INVOICE TO:
SEE BILLING INSTRUCTIONS ON REVERSE
a. NAME: Department of Interior / NBC
NRCPayments@nbc.gov
b. STREET ADDRESS (or P.O. Box): Attn: Fiscal Services Branch - D2770
7301 W. Mansfield Avenue
c. CITY: Denver | d. STATE: CO | e. ZIP CODE: 80235-2230

17(h) TOTAL (Cont. pages)

$431,328.36 — 17(i). GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
Jeffrey R. Mitchell
Contracting Officer
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

TEMPLATE - ADM002 SUNSI REVIEW COMPLETE SEP 26 2011 ADM002

OPTIONAL FORM 347 (REV. 3/2005) PRESCRIBED BY GSA/FAR (48 CFR) 53.213(f)

In accordance with Section G.4, Task Order Procedures, of Contract No. NRC-HQ-11-C-04-0044, this definitizes Task Order No. 1. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No.1 shall be in effect from Day of Award through June 30, 2012, with a cost ceiling of $431,328.36. The amount of $406,914.40 represents the estimated reimbursable costs, and the amount of $24,413.96 represents the fixed fee.

The amount obligated by the Government with respect to this task order is $250,000.00, of which $235,849.55 represents the estimated reimbursable costs, and the amount of $14,150.45 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: Annie Ramirez
Project Officer
301-251-7537

Contractual Matters: Jeffrey R. Mitchell
Contract Specialist
301-492-3639

Acceptance of Task Order No.1 should be made by having an official, authorized to bind your organization, execute two copies of this document in the space provided and return one copy to the Contract Specialist at the address identified in Block No. 5 of the OF 347. You should retain the second copy for your records.

ACCEPTANCE:

[signature]

NAME

President

TITLE

9/23/2011

DATE

STATEMENT OF WORK FOR COMMERCIAL
NRC-HQ-11-C-04-0044
CARS Task Order #1

JCN V6020 (New Reactors) & V6268 (Operating Reactors)

TITLE: Development, Verification and Documentation of ABWR TRACE Models with SVEA-96 Optima2 Fuel

BACKGROUND

The Office of New Reactors (NRO) is currently conducting a review of the applicability of Westinghouse loss of coolant accident (LOCA), anticipated transient without scram (ATWS), anticipated operational occurrence (AOO), and stability analyses methods to the ABWR plant design with a SVEA-96 Optima2 fueled core. As part of this review effort, NRC staff will perform a series of LOCA, ATWS, AOO, and stability confirmatory calculations using TRACE and PARCS.

In order to perform the ABWR confirmatory calculations, the staff requires that the previously developed ABWR DCD-specific TRACE models be documented and verified. In addition, several tasks are required to update, verify and document the ABWR TRACE model to reflect the changes in fuel design and other plant parameter differences between the DCD-specific GE ABWR and the Toshiba ABWR. All documentation shall be reviewed per the Quality Assurance (QA) process described in the "Reporting Requirements" section herein.

OBJECTIVE

The objective of this task order is to support the development of TRACE ABWR models with SVEA-96 Optima2 fuel. This effort shall include documenting and verifying the inputs in the previously developed ABWR TRACE model. In addition, several tasks are included that are related to the development of the ABWR TRACE model to include SVEA-96 Optima2 fuel and other plant parameter differences between the GE ABWR and the Toshiba ABWR, and the corresponding documentation. This work supports the NRO regulatory review of the applicability of Westinghouse safety analyses methods to ABWR.

SCOPE OF WORK

Task 0 Kick Off Meeting

Within three weeks of contract task order award a kickoff meeting shall be held at NRC headquarters in Rockville, Maryland for an orientation and exchange of materials.

Task 1: Verification and Documentation of Inputs and Data Requirements

a) The contractor shall document and verify the inputs in the existing TRACE ABWR steady state (SS) plant model with GE P8X8R fuel, including all engineered safety features (ESFs), control systems, and other components that are modeled for LBLOCA, SBLOCA, AOOs, ATWS, and stability transient calculations. The NRC staff will provide available documents including the DCD, licensing topical reports (LTRs), available plant model calculation notebooks, responses provided to Requests for Additional Information (RAIs), etc., as sources of information to be referenced. The contractor shall provide references for all inputs where an appropriate reference can be found and document and QA review the model in the form of a calculation notebook.

The contractor shall update the existing TRACE ABWR Steady State (SS) model with GE P8X8R fuel, if the inputs as extracted from the references do not agree with what is present in the current SS model with GE P8X8R fuel. The contractor shall test the TRACE ABWR SS model with GE P8X8R fuel after the inputs are updated. The TRACE model shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The contractor shall document and QA review the changes made to the TRACE model in the calculation notebook.

b) The contractor shall identify inputs in the TRACE ABWR SS model with GE P8X8R fuel for which references cannot be found. The contractor shall document and QA review the findings in a letter report.

Task 2: Update TRACE Model for Toshiba ABWR

a) The contractor shall update the TRACE ABWR SS model with GE P8X8R fuel to model the differences that exist between the GE ABWR and the Toshiba ABWR (to be referred to as the TRACE Toshiba ABWR SS model) including all engineered safety features (ESFs), control systems, and other components that are modeled for LBLOCA, SBLOCA, AOOs, ATWS, and stability transient calculations (e.g. pump curves, etc.). The NRC staff will provide available documents including the DCD, licensing topical reports (LTRs), available plant model calculation notebooks, responses provided to Requests for Additional Information (RAIs), etc., as sources of information to be referenced. The contractor shall test the TRACE Toshiba ABWR SS model after the inputs are updated. The TRACE model shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The contractor shall provide references for all inputs (that were not previously documented in Task 1) where an appropriate reference can be found and document and QA review the model in the form of a calculation notebook.

b) The contractor shall identify inputs in the TRACE Toshiba ABWR SS model for which references cannot be found. The contractor shall document and QA review the findings in a letter report.

Task 3: Verify and Document Collapse Heat Structures

The contractor shall collapse the vessel heat structure components in the TRACE Toshiba ABWR SS model that were originally developed for a vessel model with 6 azimuthal sectors into vessel heat structure components sized appropriately for a vessel model with 1 azimuthal sector. The contractor shall test the TRACE Toshiba ABWR SS model after the inputs are updated. The TRACE model shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The contractor shall document and QA review the collapsed vessel heat structure inputs. The documentation shall be in the form of a section to be added to the calculation notebook developed in Task 2.

Task 4: Generate SVEA-96 Optima2 CHAN Model

a) **Collect SVEA-96 Optima2 CHAN Geometry Information**

The contractor shall collect, document, and QA review the geometry information that is necessary to model the SVEA-96 Optima2 CHAN component. The documentation shall provide appropriate references for all inputs. The NRC staff will provide available plant specification documents including the DCD, licensing topical reports (LTRs), available plant model calculation notebooks, responses provided to Requests for Additional

Information (RAIs), etc., as sources of information to be referenced. The documentation shall be in the form of a section to be added to the calculation notebook developed in Task 2.

b) **Build the Base SVEA-96 Optima2 CHAN Model**

The contractor shall build the base TRACE SVEA-96 Optima2 CHAN model. This base model shall be a hydraulic model that will include the CHAN component connected to FILL and/or BREAK components, and shall reflect the SVEA-96 Optima2 geometry information collected in Task 4a. The contractor shall document and QA review the changes made to the TRACE model in the form of a section to be added to the calculation notebook developed in Task 2.

c) **Tune the Loss-Coefficients in the SVEA-96 Optima2 CHAN Model**

The contractor shall tune the loss-coefficients in the SVEA-96 Optima2 CHAN base model based on the CPR correlation test data. The parameters to be tuned include the inlet nozzle loss coefficient, the outlet nozzle loss coefficient, the spacer grid loss coefficients, and the net bypass leakage flow loss coefficients. The contractor shall document and QA review the changes made to the TRACE model in the form of a section to be added to the calculation notebook developed in Task 2.

d) **Determine Number of Rod Groups and Rod Group Assignments**

The contractor shall determine the number of rod groups to be used, identify the rod group assignments for the SVEA-96 Optima2 CHAN model, and update the SVEA-96 Optima2 CHAN model. The contractor shall document and QA review the rod group assignments in the form of a section to be added to the calculation notebook developed in Task 2.

e) **Optimize SVEA-96 Optima2 CHAN Axial Nodalization**

The contractor shall optimize the axial nodalization of the SVEA-96 Optima2 CHAN component by comparing TRACE results to the SVEA-96 Optima2 stability test data. The NRC staff shall provide the SVEA-96 Optima2 stability test data. The contractor shall document and QA review the axial nodalization optimization in the form of a section to be added to the calculation notebook developed in Task 2.

f) **Verify the Fuel Model Options for the SVEA-96 Optima2 CHAN Component**

The contractor shall develop and perform computational tests to determine whether the fuel models in the SVEA-96 Optima2 CHAN model are assigned appropriate values, and whether the fuel model functions are working properly. These fuel model functions include the oxide layer models, the dynamic gap conductance, the fuel thermal conductivity, the CHF correlation, and the CCFL model. The contractor shall document and QA review the computational tests and results in the form of a section to be added to the calculation notebook developed in Task 2.

g) **Finalize CHAN component documentation and verification**

The contractor shall incorporate the SVEA-96 Optima2 CHAN component into the TRACE Toshiba ABWR SS model, finalize the documentation and QA review of the tasks that were performed in Tasks 4.a through 4.f and incorporate NRC staff comments

into the documentation. The contractor shall test the TRACE Toshiba ABWR SS model after the inputs are updated. The TRACE model shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The documentation shall be in the form of sections added to the calculation notebook developed in Task 2.

Task 5: SVEA-96 Optima2 Fuel Performance Calculations

The contractor shall perform FRAPCON calculations for the various SVEA-96 Optima2 rod groups to generate relevant pin data for TRACE (namely gas composition and pin pressure data as a function of exposure). The contractor shall perform one FRAPCON calculation for each rod type identified in the Nuclear Design Report for the ABWR SVEA-96 Optima2 reference core, to be provided by the staff. The FRAPCON decks shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The contractor shall document and QA review the FRAPCON model generation and calculation results in a calculation notebook.

Task 6: Generate Nodal Mapping Files

a) The contractor shall develop a tool that generates thermal hydraulic node to neutronic node mapping files. The contractor shall then test the tool using test cases developed by the contractor. Documentation and verification of codes, scripts, and tools should follow the description provided in the "Reporting Requirements" section herein. The contractor shall document and QA review the development of the nodal mapping tool in the form of a letter report.

b) The contractor shall generate two sets of mapping files between the thermal-hydraulic nodes (TRACE) and the neutronic nodes (PARCS) that account for borated conditions in the reflector using the nodal mapping tool developed in Task 6a. The mapping files for the ATWS model shall have a 4:1 channel grouping and the mapping files for the ATWS-I model shall have a 1:1 channel grouping. The contractor shall document and QA review the mapping files in the form of a Section added to the letter report developed for Task 6a.

Task 7: Generalize the Core Model Generating Tool

a) The contractor shall update the platform of the core model generating tool from MATLAB to Java. The staff will provide the current core model generating tool and corresponding documentation as a starting point for this task.

b) The Java core model generating tool shall be generalized to allow the tool to be used for BWR2 – 6, ABWR, and ESBWR plant designs. Documentation and verification of codes, scripts, and tools should follow the description provided in the "Reporting Requirements" section herein. The contractor shall document and QA review the generalized core model generating tool. The documentation shall be in the form of a letter report.

Task 8: Generate ABWR Core Models

The contractor shall use the generalized core model generating scripting tool to be developed in Task 7 to generate the ABWR core models and insert the ABWR core models into the TRACE Toshiba ABWR SS model. The contractor shall test the TRACE Toshiba ABWR SS model after the updated ABWR core model has been inserted to ensure that updated core provides reasonable results. The TRACE model shall be maintained under the Quality Control (QC)

process described in the "Reporting Requirements" section herein. The contractor shall document and QA review the generation of the ABWR core models. The documentation shall be in the form of sections to be added to the calculation notebook developed in Task 2.

Task 9: Initialize ABWR Containment

The contractor shall perform TRACE steady state iterations on the TRACE Toshiba ABWR SS model to determine the appropriate ABWR containment initial condition inputs, including humidity, non-condensable temperature, non-condensable pressure, and the temperatures of the containment heat structure components. The acceptance criterion for all parameters specified above is ±1%. The contractor shall test the TRACE Toshiba ABWR SS model after the inputs are updated. The TRACE model shall be maintained under the Quality Control (QC) process described in the "Reporting Requirements" section herein. The contractor shall document and QA review the ABWR containment initialization in sections to be added to the Task 2 calculation note.

Task 10: Develop Tool to Automatically Check Cross-Sections

The contractor shall develop a tool in Java that automatically checks that none of the cross-sections become negative over the PARCS analysis extrapolation range. Documentation and verification of codes, scripts, and tools should follow the description provided in the "Reporting Requirements" section herein. The contractor shall document and QA review the tool and its verification in a letter report.

Task 11: Check SVEA-96 Optima2 TRITON Cross-Sections

The contractor shall use the tool developed in Task 10 to check the SVEA-96 Optima2 cross-sections generated by TRITON to verify the robustness of the set (that none of the cross-sections become negative). The contractor shall document and QA review the checks performed on the SVEA-96 Optima2 cross-sections in a letter report.

Task 12: On Call Technical Assistance

The contractor shall provide clarifications and assist the staff in exercising the deliverables provided under this task order. The contractor shall respond to the staff's questions and resolve issues raised during preliminary and final acceptance reviews.

RESEARCH QUALITY

The quality of NRC research programs is assessed each year by the Advisory Committee on Reactor Safeguards. Within the context of their reviews of RES programs, the definition of quality research is based upon several major characteristics:

Results meet the objectives (75% of overall score)
- Justification of major assumptions (12%)
- Soundness of technical approach and results (52%)
- Uncertainties and sensitivities addressed (11%)

Documentation of research results and methods is adequate (25% of overall score)
- Clarity of presentation (16%)
- Identification of major assumptions (9%)

It is the responsibility of the contractor to ensure that these quality criteria are adequately addressed throughout the course of the research that is performed. The NRC project manager and technical monitor will review all research products with these criteria in mind.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

Only those members of the contractor's staff with a proven record of delivering high-quality TRACE decks to the NRC shall be assigned as key personnel on any of the identified tasks.

REPORTING REQUIREMENTS

NRC Project Managers will provide a concise list of reports to be provided; the desired level of contractor management review of reports; and the frequency, content, and distribution of the reports.

All of the documentation developed as part of this contract requires a QA review. A QA review requires that all documented information, as well as all TRACE model updates are reviewed and verified by an independent reviewer (another competent engineer who did not contribute to the development or documentation of the section being reviewed).

All codes, scripts, and tools should have a requirements specification and should be commented such that another competent engineer could understand the purpose, inputs and functions.

Codes, scripts, and tools should be verified using test calculations and procedures.

Decks, codes, scripts, and tools should be maintained under a quality control process such that: (1) pedigree is understood (e.g. version control), (2) modifications are controlled and documented, and (3) legacy versions are maintained to prevent loss of work due to erroneous updates.

Monthly Letter Status Report

A Monthly Letter Status Report (MLSR) is to be submitted to the NRC Project Manager by the 20th of the month following the month to be reported with copies provided to the following:

RESDSAMLSR.Resource@nrc.gov

The MLSR shall identify the title of the project, the job code, the Principal Investigator, the period of performance, the reporting period, summarize each month's technical progress, list monthly spending, total spending to date, and the remaining funds and shall contain information as directed in NRC Management Directive 11.1. Any administrative or technical difficulties which may affect the schedule or costs of the project shall be immediately brought to the attention of the NRC project manager.

DELIVERABLES/SCHEDULE AND/OR MILESTONES

1. The contractor shall provide a calculation notebook, as described in Task 1, to NRC staff by 3 months after contract award. The contractor shall provide an updated TRACE ABWR SS model with GE P8X8R fuel to NRC staff by 3 months after contract award. The letter report, as described in Task 1, shall be provided to NRC staff by 2 months after contract award.

2. The contractor shall provide the TRACE Toshiba ABWR SS model to NRC staff by 3 months after contract award. The contractor shall provide the calculation notebook, as described in Task 2, to NRC staff by 3 months after contract award. The letter report, as described in Task 2, shall be provided to NRC staff by 2 months after contract award.

3. The sections of the calculation note documenting the collapse of the heat structures shall be provided to NRC staff by 2 months after contract award. The contractor shall provide the TRACE Toshiba ABWR SS model with updated heat structure inputs to NRC staff by 2 months after contract award.

4. SVEA-96 Optima2 CHAN component and the CHAN model development sections of the calculation notebook shall be provided to NRC staff by 4 months after contract award. The TRACE Toshiba ABWR SS model updated to include the SVEA-96 Optima2 CHAN component and the finalized CHAN model development sections of the calculation notebook shall be provided to NRC staff by 5 months after contract award.

5. The FRAPCON models and calculation results and the calculation notebook shall be provided to NRC staff by 3 months after contract award.

6. The nodal mapping tool and the letter report shall be provided to NRC staff by 5 months after contract award. The mapping files and updated letter report including documentation of the mapping file development shall be provided to the NRC staff by 6 months after contract award.

7. The updated core generating tool and the letter report shall be provided to NRC staff by 3 months after contract award.

8. The TRACE Toshiba ABWR SS model updated to include the core models generated in Task 8 and the corresponding calculation notebook sections shall be transmitted to the staff by 4 months after the start of this contract.

9. The TRACE Toshiba ABWR SS model with updated, initialized containment and the corresponding calculation notebook sections shall be provided to NRC staff by 4 months after contract award.

10. The cross section verification tool and the letter report shall be provided to NRC staff by 6 months after contract award.

11. The letter report shall be provided to NRC staff by 7 months after contract award.

12. Monthly letter status reports shall be provided as specified above.

Task	Delivery Dates (months after award)		Deliverables
	Preliminary Model/Reports	Final Model/Reports*	
Task 1a	2 months	3 months	TRACE ABWR SS model with GE P8X8R fuel and calculation notebook documenting all model inputs
Task 1b	N/A	2 months	Letter report documenting missing information for TRACE ABWR SS model with GE P8X8R fuel
Task 2a	2 months	3 months	TRACE Toshiba ABWR SS model and calculation notebook sections documenting all model inputs
Task 2b	N/A	2 months	Letter report documenting missing information for TRACE Toshiba ABWR SS model
Task 3	1 months	2 months	TRACE Toshiba ABWR SS model with collapsed heat structures and calculation notebook sections documenting all model input changes
Task 4f	3 months	4 months	TRACE ABWR SVEA-96 Optima2 CHAN component and calculation notebook sections documenting all CHAN component model development
Task 4g	4 months	5 months	TRACE Toshiba ABWR SS model with SVEA-96 Optima2 CHAN component and finalized calculation note sections documenting the TRACE ABWR SVEA-96 Optima2 CHAN component development and input changes to TRACE model to incorporate this component
Task 5	2 months	3 months	FRAPCON calculation results for the ABWR SVEA-96 Optima2 reference core and calculation notebook sections documenting all model input changes
Task 6a	N/A	5 months	Nodal mapping tool and letter report documenting the tool development
Task 6b	5 months	6 months	Two sets of nodal mapping files for ABWR reference core with SVEA-96 Optima2 fuel and corresponding letter report sections (added to Task 6a letter report)
Task 7	N/A	3 months	Automatic core generating tool and corresponding letter report documentation
Task 8	3 months	4 months	TRACE Toshiba ABWR SS model with updated core model and calculation notebook sections documenting all model input changes
Task 9	3 months	4 months	TRACE Toshiba ABWR SS model with initialized containment and calculation notebook sections documenting all model input changes
Task 10	N/A	6 months	Cross-section robustness verification tool and letter report documentation of tool development

Task 11	6 months	7 months	Letter report documenting verification of SVEA-96 Optima2 cross-sections

The quality of the preliminary model and report is the best deliverable and final other than modifications that may become necessary due to NRC comments.

* Draft "final" reports, which include NRC comments from the preliminary models/reports, shall be provided at least two weeks prior to delivery date of final report

MEETINGS AND TRAVEL

Kick Off Meeting at NRC HQ, Rockville MD.

NRC-FURNISHED MATERIAL

- A TRACE executable with compatible SNAP counterpart
- Current ABWR TRACE plant models
- ABWR DCD, Revision 4
- Available licensing topical reports
- Existing ABWR calculation notebooks
- Responses to the Requests for Additional Information (RAIs)
- CPR correlation test data
- SVEA-96 Optima2 stability test data
- SVEA-96 Optima2 TRITON cross-sections
- Nuclear Design Report for ABWR SVEA-96 Optima2 Reference Core
- Current core model generating tool

In general, existing input decks and documentation will be provided by the NRC staff. Additional information may also be available on the NRC TRACE Developer Information Exchange website. Additional required data identified by the contractor in Task 1 and requested from the staff will be furnished by the NRC as it becomes available. If plant-specific information needed for modeling is unavailable, the contractor shall use generic information or models from a similar plant and note this as a limitation of the model.

TECHNICAL DIRECTION

Technical direction will be provided by the Project Manger, Annie Ramirez, who can be reached at:

Mail Stop: C3A7M
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Phone: (301) 251-7537
Email: annie.ramirez@nrc.gov

Express mail should be sent to:
U. S. Nuclear Regulatory Commission
Mail Stop: C3A7M
11545 Rockville Pike
Rockville, MD 20852-2738