



**ASME Standards Technology, LLC
(ASME ST-LLC)
Request for Proposals (RFP)
RFP-ASMEST-08-02
Task Investigator (Task 11) – Gen IV / NGNP Materials Project**

Date Posted: March 27, 2008

Proposal Due Date: April 11, 2008 by 1:00 PM EST.

1. Summary

ASME Standards Technology, LLC is soliciting proposals for services as Task Investigators for task 11 (New Materials for NH) for the Generation IV / NGNP Materials project.

This is a continuation of the existing Cooperative Agreement between ASME Standards Technology, LLC and The U.S. Department of Energy supporting the Generation IV / NGNP programs. The scope includes development of technical basis documents necessary to update and expand codes and standards for application in next generation reactor systems that operate at elevated temperatures. This is a multi-year agreement. A project structure is already in place that includes a Steering Committee, and subcontracted Task Investigators and Technical Advisors.

2. Scope of Work

a. Statement of Work

Please see Appendix A for the “Statement or Work”.

b. Task Investigator Scope Description

Task Investigators (TI’s) perform the work on each of the individual tasks described in the Statement of Objectives. A close collaboration between the Task Investigator and the Technical Advisor (TA) is expected given that the TA’s responsibilities include ensuring that all technical aspects are properly addressed for example: Has the Task Investigator identified the critical issues (has he/she dug out the relevant background information). Multiple Investigators may be assigned to each task. Task Investigators will report to the Project Manager.

c. Deliverable

All deliverables are clearly identified for each task. The deliverable shall be a technical report provided as an electronic file in MS Word format. Recommendations regarding R&D and specific testing that should be conducted (if any) to further strengthen the technical validity of the report must be included. Report outline to follow ASME ST-LLC’s Style Guide & Template (a copy will be provided to contract recipients). One review cycle is anticipated and modifications required to the report, as a result of the review cycle, are the responsibility of the contractor awarded the contract.

d. Schedule

The final deliverable for each task is shown on the Project Schedule. See Appendix B for

the schedule. Investigators shall submit a schedule with their proposal describing the major milestones and reporting schedule.

e. Reporting:

Quarterly, Yearly and Final reports are due as within 30 days after the reporting period.

f. Travel Requirements

Current travel is anticipated to be twice per year with the possibility for an overnight stay. Travel expenses will be reimbursed, per the project Travel Policy: See link: [Travel Policy](#).

g. Budget

The budget for each task will vary, the total budget for the task 11 will not exceed \$50,000.00. Note: the budget includes: project admin & management fees, task advisors fees and task investigator fees.

3. Applicant Eligibility Requirements

ASME ST-LLC is seeking proposals from qualified engineering firms, individuals, or consultants. In addition to relevant technical qualifications and experience, applicants must have an understanding of Very High Temperature Reactor (VHTR) design concepts. Applicants may not serve as both the Task Investigator and Technical Advisor for the same task.

Federally Funded Research and Development Centers (FFRDC's) are not eligible for funding under this award.

4. Basis for Selection and Award

Selection of a proposal by ASME ST-LLC will be achieved through a process of evaluating and comparing the relative merits of the applicant's complete applications. This process reflects ASME ST-LLC's desire to accept an application based on its potential in best achieving program objectives, rather than solely on evaluated technical merit or cost. Evaluation criteria includes, but is not limited to, the following:

- Technical capabilities
- Access to the data require to perform the task
- Experience
- Price
- Agreement with Terms and Conditions

It is anticipated that there may be multiple awards resulting from this solicitation. However, ASME ST-LLC reserves the right to award, in whole or in part, any, all, or none of the applications submitted in response to this solicitation.

5. Contract Terms and Conditions

A labor hour and expenses type contract shall be used. The project sponsor, U.S. Department of Energy (DOE), must also approve the selected applicant. Draft terms and conditions are included: See links for ASME ST-LLC T&C; [1600.5 form](#); [10cfr Subpart C 1-1-05 Edition](#); [Disclosure of Lobbying Activities \(Standard Form LLL\)](#).

The final contractual terms and conditions will be negotiated between ASME ST-LLC and the selected applicant(s) following award.

ASME ST-LLC shall provide required access to codes and standards and other technical references necessary for performance of the work.

6. Submission Requirements

- a. Proposal Due Date: Proposals and amendments of proposals must be received by April 11, 2008 by 1:00 PM EST.. Applicants are encouraged to transmit their proposal well before the deadline.
- b. Anticipated Selection and Award Date: It is anticipated that selection and award will be made within 5 days of the proposal due date.
- c. Application Preparation Costs: This solicitation does not obligate ASME ST-LLC to pay any costs incurred in the preparation and submission of proposals or in making necessary studies or designs for the preparation thereof or to acquire, or contract for any services.
- d. Application Clarification: ASME ST-LLC reserves the right to require proposals to be clarified or supplemented to the extent considered necessary. The award may be made after few or no exchanges, discussions or negotiations. Therefore, all applicants are advised to submit their most favorable application to ASME ST-LLC. ASME ST-LLC reserves the right, without qualification, to reject any or all proposals received in response to this solicitation and to select any proposal, in whole or in part, as a basis for negotiation and or award.

ASME ST-LLC reserves the right to modify or cancel this solicitation. All questions relating to the solicitation must be submitted to the contact below. Any amendments to the solicitation will be posted on the ASME ST-LLC web site (<http://www.stllc.asme.org/>).

- e. Treatment of Proprietary Information: A proposal may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the applicant does not want disclosed to the public or used by ASME ST-LLC for any purpose other than proposal evaluation. To protect such data, the applicant should specifically identify the data to be protected.
- f. Proposal Preparation and Submittal Instructions:

Response should include two separate documents, a Technical Proposal, and a Financial Proposal.

1. Technical Proposal

- a. Provide organization name and contact information.
- b. Provide evidence of technical capabilities: the credentials, qualifications, capabilities, and experience of individuals and the organization.
- c. Identify the specific task(s) to be investigated.
- d. Confirm agreement with the Scope of Work for the specified task.

2. Financial Proposal

- a. Provide an hourly billing rate quotation and estimated project maximum.
 - b. Confirm agreement with the draft Terms and Conditions, or state any specific exceptions.
3. Submit Technical and Financial responses via e-mail to the ASME ST-LLC contact below.
 4. Responses must be received on or before the deadline.

7. ASME Standards Technology, LLC Contact Information:

Name: Jim Ramirez

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Statement of Work

TASK 11: New Materials for NH

Background:

Although current VHTR concepts are structured around the use of metallic materials currently approved for Subsection NH construction, it would be desirable to have additional materials available for consideration in accommodating the unique requirements of the VHTR. Unfortunately, obtaining complete approval of new materials for NH construction involves much more than establishing allowable stress values. It also involves establishing design rules for deformation controlled stresses, welding and weld rod materials, weld strength reduction factors, determination of creep law constants for inelastic analyses, isochronous stress strain curves, fatigue curves, yield and tensile strength reduction factors due to ageing, and consideration of cold work effects and heat treating requirements to name some of the initial issues. Therefore, the goal of this task is to review the current information available for candidate new materials such as 617, 230 and Hastelloy XR and to scope out what would be required to gain approval for Subsection NH construction. Also to assist the VHTR design community, to the extent feasible the long term very high temperature strength properties relative to a to-be-determined reference material will be estimated.

Part I: Select candidate materials and corresponding time and temperature operating conditions.

Consult with VHTR stake holders, consultants and ASME Code members to identify candidate materials and design requirements. Summarize and report the results.

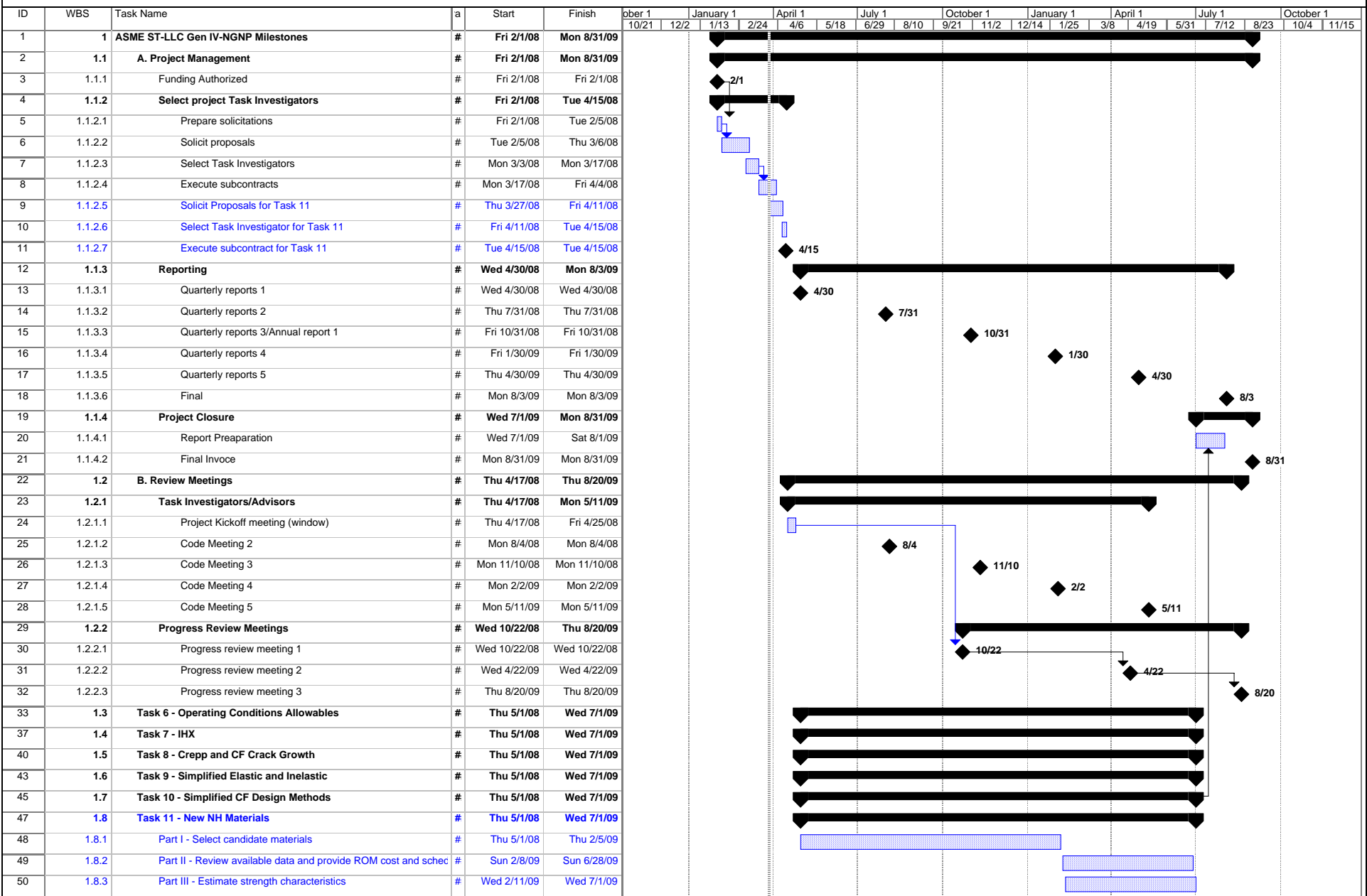
Part II: Review available data and provide ROM cost and schedule estimates.

Review available information on the candidate materials to identify gaps and provide the basis for rough estimates of the cost and schedule to obtain approval for Subsection NH construction. Identify potential critical issues such as ASTM Standards requirements. Summarize and report the results.

Part III: Estimate strength characteristics.

Based on available information, provide a benchmark comparison of the creep rupture strength at 800°C and 100,000 hr for the candidate materials. Data extrapolation should be done as consistently as possible and the impact the data population and extrapolation technique should be qualitatively noted.

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Appendix B



Project: Gen IV Year 2 timeline
Date: Thu 3/27/08

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			

Thu 3/27/08