

2. AMENDMENT/MODIFICATION NO. M001	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. FFS: 5510R141	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Valerie Whipple Mail Stop TWB-01-B10M Washington, DC 20555	CODE 3100	7. ADMINISTERED BY (If other than Item 6) U.S. Nuclear Regulatory Commission Div. of Contracts Mail Stop TWB-01-B10M Washington, DC 20555	CODE 3100

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) SOUTHWEST RESEARCH INSTITUTE INC 6220 CULEBRA RD SAN ANTONIO TX 782385100	(X)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO. NRC-41-09-011 T019
	X	10B. DATED (SEE ITEM 13) 07-16-2010
CODE 007936842	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) **B&R: 05515333120 JC: F1181 BOC: 252A APPN: 31X0200 FFS: 5510R107 -\$25,101 DE-OBLIGATION**

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 52.232-22
	D. OTHER (Specify type of modification and authority)

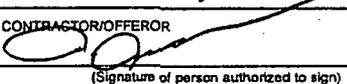
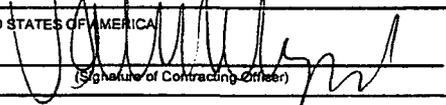
E. IMPORTANT: Contractor is not, is required to sign this document and return **X** copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

See Page 2 of the modification.

DUNS: 007936842

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) R.B. Kalmbach, Executive Director, Contracts	15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 9/8/2010	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Valerie M. Whipple Contracting Officer	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 9/10/10
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STANDARD FORM 30 (REV. 10-83)

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

SEP 14 2010

ADM001

The purpose of this modification is (1) to revise the SOW , (2) to reduce the current task order ceiling by \$25,101, from \$399,214 to \$374,113, and (3) **de-obligate** funds in the amount of \$25,101, reducing funding from \$399,214 to \$374,113 .

Accordingly, the following change is hereby made:

1. Section 1. CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE (JUN 1988) ALTERNATE I (JUN 1991), Paragraphs a. and c. are deleted in their entirety and replaced with the following:

- (a) The total estimated cost to the Government for full performance of this contract is **\$374,113**, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed fee.
- (c) The amount currently obligated by the Government with respect to this contract is **\$374,133**, of which the sum of [REDACTED] represents the estimated reimbursable costs, and of which [REDACTED] represents the fixed fee.

2. The Statement of Work is hereby revised and attached to reflect the following changes: (1) reduced number of travelers to La Hague, France from 3 to 1, (2) reduced response time for the revised environmental topical report outline, the list of general topics for discussion at the site visit and (3) elimination of the list of general topics for subissues.

A summary of obligations under this order, from date of award through this modification, is given below:

FY'10 obligation amount: \$399,214
FY'10 de-obligation amount: -\$25,101
Cumulative total of NRC obligations to date: \$374,113

This modification de-obligates **\$25,101** in FY'10 funds

All other terms and conditions of this task order remain unchanged.

STATEMENT OF WORK

PROJECT TITLE: TECHNICAL ASSISTANCE FOR THE IDENTIFICATION OF REFERENCES AND DEVELOPMENT OF AN OUTLINE FOR AN ENVIRONMENTAL TOPICAL REPORT ON REPROCESSING FACILITIES.

JOB CODE: F1181
TASK AREA 4: Technical Support/Studies Related to Environmental Activities
TASK ORDER NUMBER: 019
B&R NUMBER: 0-5515-333-120
NRC ISSUING OFFICE: FSME
NRC TECHNICAL ASSISTANCE PROJECT MANAGER (TAPM): Edna Knox-Davin (301) 415-6577
TECHNICAL PROJECT MANAGER (TPM): James Park (301) 415-6935
FEE RECOVERABLE: No
TAC NUMBER:
DOCKET NUMBER: N/A

1.0 BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) staff currently is preparing the regulatory basis for a potential rulemaking designed to allow for the licensing of commercial spent nuclear fuel reprocessing facilities and other associated facilities (e.g., fuel fabrication, vitrification, independent spent fuel storage installations). In anticipation of this rulemaking and the accompanying Environmental Impact Statement (EIS) to meet the requirements of the National Environmental Policy Act (NEPA), the NRC staff wishes to obtain assistance in obtaining references and background resources for the preparation of an Environmental Topical Report (ETR), which would address issues generically to support the development of the potential rulemaking EIS. Additionally, the NRC staff wishes to obtain assistance in outlining the ETR.

Currently within the United States, the commercial nuclear fuel cycle consists of: (1) mining of naturally occurring uranium ore; (2) milling of that ore to produce "yellowcake;" (3) conversion of the yellowcake into uranium hexafluoride (UF₆); (4) enrichment to increase the concentration of ²³⁵U in the UF₆; (5) fuel fabrication to convert the enriched UF₆ into fuel for commercial light-water power reactors; (6) use of the fuel in those reactors; and (7) interim storage of the spent nuclear fuel prior to its final and as yet uncertain disposition. This is known as the "once-through" or "open" fuel cycle.

A "closed" fuel cycle includes reprocessing of spent nuclear fuel, which would occur prior to final disposition. Reprocessing involves the chemical separation of irradiated nuclear material from fission products and other actinide elements to recover fissile (e.g., ²³⁵U, ²³⁹Pu, ²³³U) and fertile (e.g., ²³⁸U, ²³²Th) radionuclides. Reprocessing is under consideration for various reasons, including: (1) recovery of valuable fissile nuclides for use in nuclear fuel reactors, (2) reducing high-level-waste storage and disposal space requirements, and (3) elimination of storage and disposal of fissile materials.

In the Staff Requirements Memorandum (SRM) to SECY-07-0081, "Regulatory Options for Licensing Facilities Associated with the Global Nuclear Energy Partnership [GNEP]," dated June 27, 2007, the Commission directed the NRC staff to complete an analysis of Title 10 of the *Code of Federal Regulations* (10 CFR) Chapter I to identify regulatory gaps for licensing an advanced reprocessing facility and recycling reactor.

In mid-2008, two nuclear industry companies informed the NRC of their intent to seek a license for a commercial reprocessing facility in the U.S. in the 2014-2015 timeframe. An additional company expressed its support for updating the regulatory framework for reprocessing, but stopped short of stating its intent to seek a license for such a facility. At the time, the NRC staff also noted that progress on some GNEP initiatives had waned and it appeared appropriate to shift the focus of the staff's efforts from specific GNEP facility regulations to a more broadly applicable regulatory framework for commercial reprocessing facilities.

In SECY-08-0134, "Regulatory Structure for Spent Fuel Reprocessing," dated September 12, 2008, the NRC staff discussed the shift in its approach to developing the regulatory framework for commercial reprocessing facilities. The NRC staff noted that it would defer additional work on regulatory framework development efforts for advanced recycling reactors and focus on the regulatory framework revisions necessary to license a potential application for commercial reprocessing. As a result of this shift, the staff indicated that an additional review of the initial gap analysis was warranted.

The NRC staff provided this regulatory gap analysis in SECY-09-0082, "Update on Reprocessing Regulatory Framework – Summary of Gap Analysis," dated May 28, 2009. In accordance with SRM-SECY-07-0081, the gap analysis focused on necessary changes to 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," considering requirements, where appropriate, from 10 CFR Part 50, as the basis for a revised commercial reprocessing regulatory framework.

In SECY-09-0082, the NRC staff categorized each regulatory gap into one of four different types. Additionally, the NRC staff assigned the gaps qualitative priorities for resolution (i.e., low, moderate, high). These priorities were assigned based on the staff's view of the gaps requiring resolution in order to establish an effective and efficient regulatory framework for licensing commercial reprocessing facilities. Of the 23 gaps identified, 14 were characterized as "high" priority, 5 were "moderate" priority and 4 were "low" priority. The NRC staff anticipates addressing the "high" priority gaps in the rulemaking.

In SECY-09-0082 and as indicated in SECY-08-0134, the NRC staff has not considered the framework for advanced fuel cycles that would support fast reactor utility (i.e., spent fuel reprocessing with recycling of the fuel in a fast reactor). Currently, the NRC is devoting resources primarily toward establishing a regulatory framework for existing technology that could be used to reprocess and re-fabricate mixed-oxide fuel for use in light-water reactors.

Historically, the United States has had 3 civilian reprocessing facilities, which are:

- **Nuclear Fuel Services' West Valley Plant** (western New York State) that operated from 1966 to 1972. Due to seismic concerns and other issues that would have resulted

in greatly increased cost, a planned expansion of the capacity of the West Valley plant was abandoned and the plant was closed.

- Construction of **General Electric Company's (GE's) Midwest Fuel Recovery Plant** (Morris, Illinois) was completed in 1971. GE planned to use a reprocessing method based on the volatility of uranium hexafluoride to separate uranium from fission products and actinides. Design and operational problems during process testing caused GE to halt operation of the plant in 1974 before it had processed any spent fuel. However, the plant could not be abandoned due to the presence of radioactive material resulting from performance testing using uranium. The plant's spent fuel storage pond is currently used as an independent spent fuel storage installation to store commercial spent nuclear reactor fuel.
- Construction of **Allied-General Nuclear Services' Barnwell Nuclear Fuel Plant** (Barnwell, South Carolina) began in 1970. Preoperational testing of certain portions of the process had begun when Presidential decisions in 1976 and 1977 not to proceed with spent fuel reprocessing in the U.S. stopped further work and licensing actions for the plant.

2.0 OBJECTIVE

The objective of this task order is to obtain assistance with the development of references, background resources, and an outline for an ETR that would support the development of the reprocessing regulatory framework and could support the NRC staff's anticipated preparation of an EIS to accompany the potential reprocessing rulemaking effort by the NRC.

3.0 STAFFING

The Task Leader shall have in-depth expertise in at least one of the issues covered by the ETR and a general understanding of the range of environmental issues covered by associated with reprocessing and associated activities (e.g., fuel fabrication, waste handling, storage), including mitigation approaches. The Task Leader shall have demonstrated experience leading interdisciplinary teams in the completion of NEPA documents for projects of similar scope and complexity prepared to meet NEPA requirements.

Other contractor personnel shall have an appropriate combination of education, training and experience in health physics; nuclear chemistry; nuclear criticality; ecology; hydrology; geology; risk assessment; air quality; socio-economics; historical and cultural resources; cost-benefit analysis; and other technical disciplines, as necessary, for this effort.

4.0 SCOPE OF WORK AND DELIVERABLES

The contractor shall develop the set of needed references and background resources and also an outline for the ETR. This work will support the NRC staff's development of the regulatory framework for reprocessing.

The contractor shall prepare the documents described below using plain English. The documents shall be as concise as possible while maintaining sufficient detail for members of the

public to understand the basis for the conclusions reached. Text shall be supported by appropriate tables and graphics.

The work required is described in detail below.

4.1 TASK 1: INFORMATION COLLECTION AND ANALYSIS

To support the anticipated alternatives analysis in the ETR, the contractor shall collect and review information related to the environmental impacts of the so-called "open" and "closed" nuclear fuel cycles. Additionally, the contractor shall collect and review information related to the processes involved with spent nuclear fuel reprocessing and associated facilities (e.g., spent fuel handling, fuel fabrication, waste handling and storage) and environmental issues relevant to these processes. The purpose of this review is an assessment of available resources and references to be relied upon in the development of the ETR outline.

The effort shall consist of Subtasks A and B as described below and shall be subject to the project management requirements described in Section 5.0 of this SOW. Subtasks A and B will begin concurrently.

SUBTASK 1-A: INFORMATION COLLECTION

The contractor shall survey available U.S. and international (e.g., France, Britain, Japan) background resources and references related to (1) environmental impacts of the open and closed nuclear fuel cycles, and (2) the methods of reprocessing with specific focus on the PUREX and pyroprocessing methods. Among resources and references of interest to the contractor shall be descriptions of the reprocessing methods and discussions of the consequent waste streams, their handling and storage considerations, the attendant environmental and monitoring issues, and environmental impacts. The contractor shall make use of the regulatory gap analysis in SECY-09-0082 and the other NRC documents to aid in the survey of resources and references. The information obtained should include the permitting processes and review areas of other federal and state agencies that would have jurisdiction during the licensing process.

As necessary, the NRC TPM will assist the contractor in the effort to obtain historical NRC documents relevant to reprocessing in general, the open and closed nuclear fuel cycles, and the licensing efforts and actions for the West Valley Plant, the Midwest Fuel Recovery Plant, and the Barnwell Nuclear Fuel Plant.

SUBTASK 1-B: ANALYSIS OF OBTAINED RESOURCES AND REFERENCES

The contractor shall analyze each of the resources and references obtained under Subtask A and prepare a report that addresses for each resource and reference, among other items:

- The title of the resource or reference;
- A summary of the reprocessing-related items and issues raised, including information on the environmental impacts as related to the resource areas

identified in NUREG-1748 and whether the other government agencies would review information related to the resource area;

- A comparison of those items and issues with the regulatory gaps identified in SECY-09-0082; and
- An indication whether it can serve as reference material for the ETR.

The contractor shall obtain either hard copies or electronic copies (e.g., in pdf format) of all resources and references it deems suitable for use in preparing the ETR outline. If a hard copy of a resource or reference is obtained and an electronic version is not available, the contractor shall convert the document into an electronic format (e.g., pdf format). In obtaining these references, the contractor shall determine, with the assistance of the NRC TPM, the public availability of each resource or reference.

The contractor shall provide to the NRC TPM an initial version of the report, and then on a bi-monthly basis, an updated version of the report. The initial version and each subsequent revision shall be provided as an informal submittal as indicated in Appendix A. A final report shall be provided at the close of the period of performance (see Section 10.0).

4.2 TASK 2: ETR OUTLINE DEVELOPMENT

The contractor shall develop, in consultation with the NRC TPM, an outline for the ETR. Development of the outline shall employ both text-discussions (i.e., annotated outline) and supporting visual methods (e.g., graphics storyboard). The contractor shall use Chapter 5 of NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" and past examples of NRC rulemaking EISs as aids in the development of the ETR outline.

The effort shall consist of Subtasks A and B as described below and shall be subject to the project management requirements described in Section 5.0 of this SOW.

SUBTASK 2-A: ETR DRAFT OUTLINE DEVELOPMENT

Using reference materials provided by the NRC TPM and resources and references obtained by the contractor, the contractor shall develop an initial draft outline for the ETR. The outline shall be sufficient to address the various environmental impacts anticipated for: (1) open and closed nuclear fuel cycles; (2) operation of reprocessing facilities employing the PUREX and pyroprocessing methods; and (3) operation of other facilities associated with spent fuel reprocessing (e.g., waste handling and storage facilities, fuel fabrication facilities).

The contractor shall submit the initial ETR outline to the NRC as indicated in Appendix A.

SUBTASK 2-B: REVISED ETR OUTLINE

Based on comments received from the NRC and in consultation with the NRC TPM, the contractor shall revise the outline and submit it to the NRC as indicated in Appendix A.

4.3 TASK 3 – SITE VISIT AND PUBLIC WORKSHOPS / MEETINGS

The contractor may be requested to attend a site visit to a foreign (i.e., non-U.S.) reprocessing facility and public workshops or meetings on the development of the regulatory framework for reprocessing.

The effort shall consist of Subtasks A and B as described below and shall be subject to the project management requirements described in Section 5.0 of this SOW.

SUBTASK 3-A: SITE VISIT TO FOREIGN REPROCESSING FACILITY

As requested, the contractor shall attend a site visit to a foreign reprocessing facility and take part in associated meetings with that country's regulatory agency and with the operator of the facility. In preparation for the site visit and meetings, the contractor shall identify general topics and related sub-issues for discussion. These topics and sub-issues shall focus on environmental areas of concern with respect to the licensing and operation of reprocessing and associated facilities. The general topics and the sub-issues shall be submitted to the NRC as indicated in Appendix A.

Prior to the site visit and as requested by the NRC TPM, the contractor shall provide necessary security information (e.g., names, citizenship) of any contractor staff participating in the site visit and meetings. The contractor shall coordinate with the NRC TPM to determine which contractor technical staff will participate in the site visit and meetings.

Following the site visit and meetings, the contractor shall prepare a site visit trip report. This report shall document any information that was learned, requested, or obtained both from the representatives of the regulatory agency and from representatives of the facility operator (see Section 11.0 for format requirements). The site visit trip report shall be submitted to the NRC as indicated in Appendix A.

To the extent applicable, the contractor shall make use of information gained during the site visit and meetings in the identification of resources and references (Subtask 1-A) and in the development of the ETR outline (Task 2).

SUBTASK 3-B: ATTENDANCE AT PUBLIC WORKSHOPS/MEETINGS

As requested, the contractor shall attend up to three public workshops or meetings on the regulatory basis for the reprocessing framework. In preparation for a workshop or meeting, the contractor may be requested to assist in the development of workshop/meeting presentation materials. This assistance shall take the form of review of and comment on draft presentation materials provided by the NRC TPM.

Following each workshop/meeting that the contractor has attended, the contractor shall discuss with the NRC TPM the contractor's insights and impressions gained during the workshop/meeting. This post-workshop/meeting discussion shall take place as part of the bi-weekly telephone calls between the contractor and the NRC TPM (Section 5.0).

5.0 PROJECT MANAGEMENT

Maintain Effective Communication with NRC Staff

The contractor shall maintain effective communication with NRC staff to help coordinate and integrate task work with NRC's technical and decision-making activities. For the duration of Tasks 1 - 3, the contractor shall participate in a bi-weekly telephone call with the NRC's TPM to discuss the progress to date. The contractor's Team Leader and NRC TPM shall participate in a task planning meeting at the initiation of Tasks 1 and 2 and in quarterly progress meetings held either at the NRC's offices in Rockville, MD or at the contractor's place of business.

Other Communication

The contractor shall coordinate all necessary NRC communication (other than communications for the Project Officer) for Tasks 1 - 3 through the NRC TPM.

NRC Comments

The contractor shall resolve all NRC comments through the NRC TPM when making revisions to any deliverable under Tasks 1 - 3.

Quality Assurance for the Project

The contractor shall implement and maintain quality assurance for the project in accordance with Section 13.0 of this SOW.

6.0 LEVEL OF EFFORT

6.1 TASK 1: INFORMATION COLLECTION AND ANALYSIS WITH SITE VISIT

The estimated level of effort for Task 1 is approximately 0.8 FTE, over a 6 month period anticipated to start in July 2010.

TASK 2: ETR OUTLINE DEVELOPMENT

The estimated level of effort for Task 2 is approximately 0.25 FTE, over a 6 month period anticipated to start in July 2010.

TASK 3: SITE VISIT AND PUBLIC WORKSHOPS/MEETINGS

The estimated level of effort for Task 3 is approximately 0.25 FTE, over a 6 month period anticipated to start in July 2010.

7.0 MEETINGS AND TRAVEL

The contractor's Task Leader shall meet with the NRC Project Officer and the NRC TPM at either the NRC offices in Rockville, Maryland or at the contractor's place of business, for planning meetings at the beginning of Tasks 1 and 2 and quarterly for progress reports thereafter. Upon request, the contractor's Task Leader shall meet with the NRC Project Officer and NRC TPM at the NRC offices in Rockville, MD. Meetings requiring contractor travel are summarized below.

<u>Topic</u>	<u>Location</u>	<u>Trips</u>	<u>Days</u>	<u>Staff</u>
Task Planning Meetings	Rockville, MD	1	3	1
Quarterly Meetings	Rockville, MD	2	3	1
Site Visit*	La Hague, France	1	5	1
Public Workshops or Meetings	TBD**	3	5	2

*The contractor shall not estimate travel costs associated with the site visit as such costs will be borne by the Federal Government.

**For the purposes of cost estimation, the location can be assumed as either Aiken, SC or Hanford, WA.

8.0 NRC FURNISHED MATERIAL

NRC TPM will assist the contractor in obtaining the following materials:

- SECY-07-0081, "Regulatory Options for Licensing Facilities Associated with the Global Nuclear Energy Partnership," dated June 27, 2007
- SECY-08-0134, "Regulatory Structure for Spent Fuel Reprocessing," dated September 12, 2008
- SECY-09-0082, "Update on Reprocessing Regulatory Framework – Summary of Gap Analysis," dated May 28, 2009
- "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," NUREG-1748, August 2003.
- Historical NRC documents related to reprocessing in general, the open and closed nuclear fuel cycles, and the licensing efforts and actions for the West Valley Plant, the Midwest Fuel Recovery Plant, and the Barnwell Nuclear Fuel Plant
- "Final Generic Environmental Statement on the Use of Recycle Plutonium in Mixed Oxide Fuel in Light Water Reactors," NUREG-0002, August 1976.
- Examples of previous NRC rulemaking EISs:

- "Final Environmental Impact Statement on 10 CFR Part 61 'Licensing Requirements for Land Disposal of Radioactive Waste' " NUREG-945, November 1982
- "Generic Environmental Impact Statement – Controlling the Disposition of Solid Materials," Draft Report for Comment, NUREG-1812, March 2005.
- NUREG-1909, "Background, Status, and Issues Related to the Regulation of Advanced Spent Nuclear Fuel Recycle Facilities," ACNW&M White Paper, June 2008.
- "Draft Global Nuclear Energy Partnership Programmatic Environmental Impact Statement," DOE/EIS-0396, U.S. Department of Energy, October 2008.

9.0 CONTRACTOR ACQUIRED MATERIAL

No materials are expected to be acquired under this task order.

10.0 PERIOD OF PERFORMANCE

The deliverables and schedule for work conducted under Tasks 1 and 2 are summarized in Appendix A to this SOW.

10.1 TASK 1: INFORMATION COLLECTION AND ANALYSIS

Task 1 work shall be initiated upon notification from the NRC (expected July 2010). This task shall be closed approximately 6 months thereafter.

10.2 TASK 2: ETR OUTLINE DEVELOPMENT

Task 2 work shall be initiated upon notification from the NRC (expected July 2010). This task shall be closed approximately 6 months thereafter.

10.3 TASK 3: SITE VISIT AND PUBLIC WORKSHOPS / MEETINGS

Task 3 work shall be initiated upon notification from the NRC (expected July 2010). This task shall be closed approximately 6 months thereafter.

11.0 REPORTS

Three hard copies of the deliverables for each task shall be forwarded to the NRC TPM, as well as an electronic version (via electronic mail with electronic attachments) consistent with the word processor in use at the NRC and with this electronic version in an editable format. An additional electronic version shall be submitted in portable document format (i.e., *.pdf). Additionally, one hard copy shall be sent to the NRC Contracting Officer (CO) as soon as the documents are required to be available.

All information, reports, and items produced by the contractor in efforts under this task shall become the property of the NRC and shall be given to the NRC no later than the termination of this task.

12.0 TECHNICAL DIRECTION

James Park is designated the NRC TPM and Edna Knox-Davin is designated the NRC Project Officer for this procurement. Technical instructions may be provided to the contractor during the duration of Tasks 1 - 3. Technical instructions shall not constitute new assignments of work or changes of such a nature as to justify an adjustment in cost or period of performance. Directions, if any, for changes in scope of work, cost, or period of performance will be issued by the NRC Contracting Officer.

13.0 STANDARD WORK PRACTICES

For all draft and final reports under this agreement, the contractor shall assure that an independent review of numerical computations and mathematical equations and derivations is performed by qualified personnel other than the original author(s) of the reports and other than the person who performed the original calculation. If the contractor proposes to check less than 100 percent of all computations and mathematical equations and derivations in the report(s) (such as may be the case when there is a large number of routine, repetitive calculations), the contractor must first obtain written approval from the NRC TPM.

When revisions for the reports are issued, a section must be included in the revised report to document dates of, reasons for, and scope of all changes made since the issuance of the first contractor's approved report.

NRC has the option of appointing a Peer Group to review, comment, and recommend changes to the draft and final reports. The contractor may recommend candidates for the Peer Group for approval by the NRC TPM.

In the occasion of dissent in the content of the final report, the dissenting party shall have the option of stating its viewpoints and findings in a section of the report.

This section does not intend to create the development of a formal quality assurance program nor does it require formal quality assurance program documentation or review.

14.0 FINANCIAL AND TECHNICAL STATUS REPORTS

The contractor shall submit periodic technical and financial reports in accordance with the contract. The estimated staff effort should be recorded at the subtask level. The work accomplished and the degree of completeness should also be tracked by subtask. The reports are due within 20 calendar days after the end of the report period (i.e., each four week period). The TPM shall receive two copies of the periodic status report, and the Project Officer shall receive one copy. See the contract for further distribution requirements.

**APPENDIX A
SCHEDULE AND DELIVERABLES**

The schedule for deliverables in Tasks 1 - 3 is outlined below:

<u>Deliverable</u>	<u>Schedule</u>
(1-A) Initial Report on Obtained Resources and References	20 business days after the Task Order (TO) is initiated.
(1-B) Interim Updated Report on Obtained Resources and References	60 business days after the TO is initiated.
(1-B) Final Report on Obtained Resources and References	100 business days after the TO is initiated.
(2-A) Initial ETR Outline	50 business days after the TO is issued.
(2-B) Revised ETR Outline	30 business days following the receipt of comments from the NRC TPM on 2-A.
(3-A) General topics for discussion at site visit and associated meetings	15 business days after the TO is initiated.
(3-C) Site visit trip report	20 business days after completion of the site visit.