April 25, 2016

Dear Prospective Offeror:

Request for Proposal No: 20160216TB, Design and Fabrication of a Cask Storage System for the Capsule Extended Storage Project, Response to Offeror Questions/Amendment 2

Please see the CH2M Hill Plateau Remediation Company (CHPRC) response to the Offeror questions submitted in response to the subject Request for Proposal.

Questions & Responses:

1. Question: RFP Part A, Section 4.2D Management Approach: Is it CHPRC's expectation that a "draft" QA Plan be submitted with the proposal or a "final" (approved) version of a QA Plan be submitted with the proposal?

   Response: The QAP shall satisfy requirements of Section 6.2 of the SOW. An approved QAP must be submitted with the proposal. The QAP can be updated, if needed, throughout the life of the project, as the project matures.

2. Question: RFP Part A, Appendix A, Alternate Capsule Packaging Requirement for Borehole Disposal, 1st Paragraph: This section states that "*…the Contractor shall be responsible for the design, fabrication, supply, and delivery of a capsule extended dry storage system that meets the requirements of the* <u>*base option and facilities*</u> *later deep borehole disposal of the capsules…*" Does this statement mean that <u>all</u> of the base option requirements (e.g., design life, temperature limits, corrosion allowance, facilities, etc.) of the *Functions and Requirements Document*, CHPRC-02252, Rev. 2, apply to this option?

   Response: All base option requirements as stated in CHPRC-02252, CHRPC-02622, as well as those requirements stated in RFP 20160216TB Part C, Appendix A, apply to the alternative capsule packaging requirement for borehole disposal.

   As noted in RFP 20160216TB Part C, Appendix A, first paragraph: "*Where the supplemental requirements in this Appendix are in conflict with the requirements of the base option, the supplemental requirements in this Appendix shall take precedence for this alternate packaging option.*"

   It is therefore expected that all Offerors shall clearly and specifically identify any such conflicts, and in sufficient detail so as to support the Offeror's technical proposal, pricing, and schedule submittal for this Alternative, their proposed solution as it relates to the requirement(s) or criterion in conflict.

3. Question: RFP Part C, Section 6.2, Quality Assurance and Control: There seems to be a discrepancy in the CHPRC QA requirements contained in the functional design criteria document (CHPRC-02622) and RFP 20160216TB. There are more NQA-1, Part II Subparts identified in CHPRC-02622. Which document takes precedence?

   Response: The requirements identified in the SOW are to be used for this proposal. The FDC identifies additional Subparts 2.1, 2.3, 2.4, 2.8, and 2.20 which may be applicable to the project scope of work, but are not directly applicable to this contract work scope as currently envisioned. FDC language will be further evaluated and may be updated as necessary prior to award.

4. Question: Functions and Requirements Document, CHPRC-02252 Revision 2, Section 4, Packaging/Storage System Requirements, Page 16, 8th Bullet: This bullet states that "*Dose rates during transfers must not exceed 100 mrem/hr on contact, and are further subject to an as low as reasonably achievable (ALARA) decision making process.*" During some of the operational steps, e.g., welding and inspecting the canister closure, transferring the canister to the storage overpack, etc., there may be conditions where shield plugs, covers, lids, etc., are required to be removed for access, and may resultant in an increase in the surface dose rate. Does the 100 mrem/hr dose rate limit apply for these temporary conditions?

   Response: Temporary dose above 100 mrem/hr may be acceptable during processing steps if an ALARA review does not identify a better approach and if the requirements of Section 9.1 of CHPRC-02252 are satisfied. CHPRC approval will be based on the outcome of the ALARA review.

5. Question: Functions and Requirements Document, CHPRC-02252 Revision 2, Section 5, Waste Encapsulation and Storage Facility Modification Requirements, Figure 5-1: In this figure, there is depicted a railroad spur line west of and adjacent to the planned CSA location. Is that railroad spur line available for movement of equipment for the CESP project?

   Response: A safety inspection and cost assessment would need to be performed to determine availability of the railroad spur line. The proposal will assume the railroad spur line is not available.

6. Question: Functional Design Criteria Document, CHPRC-02622 Revision 1, Section 3.1, Capsule Description, Page 9, 1st Paragraph: Appendix B of the referenced document CHPRC-02248 Revision 0 identifies a strontium tracer capsule (Capsule ID S-2) that contains no radioactivity or decay heat. Is this capsule to be included in the dry storage of the radioactive capsules for the CESP?

   Response: The strontium tracer capsule is included within the scope of the cask storage system and should be managed in the same manner as the other strontium capsules.

7. Question: Amendment 1, Question/Response 23: What are the dose rate values for the capsules? Dose rates for typical capsules listed in the response do not appear to be accurate. Additionally, please provide the estimated surface dose rates for the capsules that have the

curie content identified in Estimate of *WESF Capsule Decay Heat Values on January 1, 2018*, CHPRC-02248, Rev. 0.

Response: Estimated dose rates at 1 cm have been recalculated for the three different production types of cesium capsules, and for the strontium capsules, using the curie content as of 1/1/2018 presented in CHPRC-02248, Rev. 0.

Based on the 1/1/18 decay date, the average dose rate at 1 cm in air from the surface of a typical cesium capsule is 5.32 x 10^5 (532,000) rem/hr. The estimated dose rate for each individual capsule is provided in the attached modified version of Appendix A of CHPRC-02248. CHPRC-02248 language will be further evaluated and may be updated as necessary prior to award.

Based on the 1/1/18 decay date, the average dose rate at 1 cm in air from the surface of a typical strontium capsule is 82 rem/hr. The estimated dose rate for each individual capsule is provided in the attached modified version of Appendix B of CHPRC-02248. CHPRC-02248 language will be further evaluated and may be updated as necessary prior to award.

Note that these estimates shall be confirmed by the selected CSS vendor as a part of the design.

8. Question: Amendment 1, Question/Response 37: Response states we are to use the Table in RFP Part A, Attachment 2 to capture the Task 1 – 8 totals; however, in Question/Response 90, CHPRC states they do not have an estimated number of hours necessary for technical support so the Offeror is to provide labor rates for the technical support. How is the Table in Attachment 2 to be completed if only labor rates are required?

   Response: Completion of the table in Attachment 2 is required. "To be determined" or "TBD" may be used for estimated hours.

9. Question: Amendment 1, Question/ Response 73: This question response is in regards to Section 6.2.2 of *Cask Storage System (CSS) Functional Design Criteria*, CHPRC-02622, Rev. 1, that "*the canisters shall have a design life of 300 years without loss of design function,*". This referenced document section states that "*The canisters shall be designed <u>with the intent to enable extension of the storage period</u>, without retrieval of the capsules for transfer, <u>to a total of 300 years</u> without loss of design function.*" Section 8.1 of *Functions and Requirements Document*, CHPRC-02252, Rev. 2, states that "*The canister and storage overpack shall have a <u>minimum design life of 100 years</u> or to be designed to be easily replaced without relocation of the capsules from the storage configuraton….CSS shall be designed <u>with the intent to enable future extension of the storage period to a total of 300 years</u> without loss of containment.*" The response appears to modify the specified design life and the intended extension for the canisters in the referenced documents. Please clarify the response as it relates to the specified minimum 100 year design life for the canister.

   Response: The canister shall have a <u>minimum</u> design life of 100 years and shall be designed with the intent to enable future extension of the storage period to a total of 300 years without loss of containment; i.e. designed with the ability to enable / support extension of the storage

period, without retrieval of the capsules for transfer, to a total of 300 years without loss of design function.

10. Question: Amendment 1, Question/Response 95: If new video systems are specified, are they required to be closed circuit?

    Response: Closed circuit is preferable. Alternate systems may be acceptable, but require CHPRC approval.

11. Question: What annualized Operating and Maintenance costs for the WESF facility could be utilized for performing a cost benefit trade-off study for new equipment, facility modifications, and expected time savings?

    Response: The WESF Operating and Maintenance cost is $8 million/year for current WESF base operations.

12. Question: Assumption 8 in Section 1-3 of WMP-16940 states that the fill gas in the annulus between the inner and outer capsule is a gas mixture with the thermal conductivity similar to dry air. Please confirm this assumption is to be used for the CSS Project.

    Response: The stated assumption is correct. The annulus between the inner and outer capsules is a gas mixture with a thermal conductivity similar to dry air.

13. Question: Please define the fill gas for the annulus between the Type W overpack and the outer capsule.

    Response: The fill gas for the annulus between the Type W overpack and the outer capsule is assumed to be dry air for the purpose of this proposal.

14. Question: Can canister operations be performed on the canyon floor with the cover block removed from the G Cell or the truck transport cover block?

    Response: For the purpose of this proposal, canister operations cannot generally be performed on the canyon floor with either cover block removed. Details on the proposed operation would be required to provide a specific response for that operation.

15. Question: Please confirm that (vendor) will retain ownership of all background intellectual property embedded in any deliverables provide to CHPRC.

    Background:

    - Draft Contract Section C, Section 3.5, Special Requirements, p 27, states: “All design calculations, analyses, specifications, drawings, and other detailed design documents produced under this Contract are property of the U.S. Government.”
    - Response to first round of questions, Question 1: “New design calculations, analyses, specifications, drawings and other detailed design documents produced under this Contract to modify the Contractor’s commercial system to the WESF facility and the

cesium and strontium capsule waste form will become the property of the U.S. Government. Existing design media will remain the property of the Contractor."

- General Provisions, Preamble, Item B states: "Without in any way limiting the Federal Acquisition Regulation (FAR) and Department of Energy Acquisition Regulation (DEAR) clauses which may be applicable to this action by law or regulation, the FAR, DEAR and other regulation references herein are specifically incorporated into this Contract. Applicability instructions and comments are provided for convenience only. Contractor is responsible for reviewing the full text of each clause and requesting clarification if the intent or applicability to this specific Contract is not clear."
- General Provisions, Section 12.6, Proprietary Rights, P 22, state: "All materials which Contractor is required to prepare or develop in the performance and completion of Contractor's scope of Work hereunder, including documents, calculations, maps, sketches, notes, reports, data, models and samples, and any and all inventions and copyrightable material contained therein, shall become the sole and exclusive property of CHPRC. Contractor agrees to execute all documents and to take all steps requested by CHPRC which may be required to complete transfer of such ownership and property rights."

Response: If the background intellectual property embedded in the deliverables were pre-existing and were not prepared or developed in the performance and completion of this scope of work, then the vendor retains ownership of that property.

16. Question: RFP, Section C, Section 3.1, Detailed Work Plan, p 11, WBS 013.02.04.08: This WBS includes the terms "Detailed Design" and "Final Design". Are we to assume that these terms are used interchangeably? If not, please clarify the distinction between Detailed Design and Final Design.

    Response: For the purpose of this proposal, Detailed Design includes "Preliminary Design" and "Final Design". As identified in Section 3.2.2 of the SOW, "Preliminary Design" shall be considered to be at the 60 percent completion point of the Detailed Design. Final Design includes all design after 60 percent completion of Detailed Design through issuance of a Final Design Report. The Detailed Work Plan is required to identify specific information for each of the tasks (Conceptual Design, Preliminary Design, and Final Design) per Section 3.1 of the SOW.

    For clarity, the WBS will be modified to provide separate Level 4 WBS elements for Preliminary Design and Final Design as follows.

    013.02.04.08, Preliminary Design for CSS, Transfer System, Ancillary Equipment

    013.02.04.08.01, Preliminary Design (60%)

    013.02.04.08.02, Preliminary Design Review/Report

    013.02.04.08.03, Other Preliminary Design Submittals

013.02.04.08.04, Project Management for Preliminary Design

013.02.04.14, Final Design for CSS, Transfer System, Ancillary Equipment

013.02.04.14.01, Final Design (90%)

013.02.04.14.02, Final Design Review/Report

013.02.04.14.03, Other Final Design Submittals

013.02.04.14.04, Project Management for Final Design

17. Question: RFP, Section C, Section 3.1, Detailed Work Plan, p 11, WBS 013.02.04.08: This WBS includes the terms "Preliminary Design", "Detailed Design", and "Final Design". Supporting activities 013.02.04.08.04 (Other Detailed Design Phase Submittals) and 013.02.04.08.05 (Project Management for Detailed Design) point to "Detailed Design". Under which WBS should Preliminary Design supporting activities be captured?

    Response: See the response to question 17.

18. Question: The following Sections:

    - RFP, Section A, Section 4.3.1, Cost Proposal Summary by Work Breakdown Structure p 17 of 35;
    - RFP, Section C, Section 3.1, Detailed Work Plan, p 11; and,
    - RFP, Section C, Section 3.0, Detailed Work Plan, p 9:

    From Section A, Section 4.3.1, the Design Tasks are specified as Task 1 – Conceptual Design, Task 2 – Preliminary Design, and Task 3 – Final Design. From Section 3.1, the sentence preceding the WBS Structure states: "The detailed schedule shall be developed consistent with the following Work Breakdown Structure: …". Section 3.1, WBS 013.02.04.08 includes the terms "Preliminary Design", "Detailed Design", and "Final Design".

    The WBS does not make a clear distinction between Task 2 and Task 3. We see this as confusing from the perspective of relating the WBS structure to the Work Plan and pricing of the Tasks as individual activities. Please provide clarification of the linkage between the Tasks 1-7 and the WBS provided on pages 11 to 13.

    Response: See the response to question 17.

19. Question: Document CHPRC-02252, page 4, next to Figure 2-2 states: "A motor-operated 12 ft wide rollup door (15ft high) provides access to the outside." However, the answer to Question No. 21 in the RFP Amendment 1 states: "The truck port opening is approximately

10ft wide by 12 ft high." Based on the drawings provide by CHPRC (Ex. H-2-66403, H-2 66421, H-2 66422, etc.), it appears the door height is almost 11 ft by 14 ft. Please clarify the exact size of door opening in order to reconcile CHPRC-02252, Drawings and CHPRC Amendment 1 responses.

Response: Approximate values stated are just that, approximate. The dimensions on the drawings are the design values.

The field-measured exterior dimensions of the clear opening of the door, from back of channel to back of channel of the jambs, and from bottom of lintel to the concrete floor/sill, are 10'-11½" wide by 14'-2" high. However, interferences inside the truck bay (HVAC ducting; wall-mounted equipment, electrical wiring, and instrument air lines, and the bulk of the door in the rolled-up position) restrict the usable space within the bay to nominally 10'-6" wide by 12'-0" high. The dimensions of 10-6" wide by 12'-0" high shall be used by Offerors for the purposes of the proposal. The selected contractor shall validate and confirm ALL dimensions that are considered critical to the design prior to commencing fabrication.

20. Question: We understand from Amendment 1 that fabrication and construction of casks is not allowed on site. Can CHPRC provide an area near to WESF where suppliers could perform equipment receipt, cask equipment staging, cask assembly and concrete placement, if necessary? In addition, is CHPRC responsible for crane equipment and necessary labor to offload the heavy storage modules from delivery trailer and placement of these components in designated storage location pending use? If not please specify receipt, inspection and storage areas available for this project.

Response: CHPRC will provide equipment staging, storage, and assembly areas, including controlled access equipment staging, storage, and assembly areas sufficient to meet the requirements identified for such areas in an Offeror's proposal, and as needed by the successful contractor. This shall also include "concrete placement" areas, provided such "placement" is not in the conventional context of the construction usage, i.e. construction activities associated with pouring concrete mix / mud.

The planned Contract does not contain at this time provisions, or required terms and conditions related to on-site construction activities. The Contractor is hence prohibited from performing what would be considered to be construction activities on-site (e.g. casting of SCC storage modules). Offerors shall base their proposal of any such construction/fabrication activities being performed off-site. This restriction may be revisited at a later time should the allowance of on-site construction by the Contractor be demonstrated to be a substantial benefit to the Government.

Regarding the crane and workforce labor activities, per RFP 20160216TB Part C, Section 3.4, 3.8, 3.9 and 3.10, "The Contractor will not be performing any field construction work activities at the Hanford Site or capsule transfer operations, unless approved by CHPRC."

Site work force agreements require that all such activities be performed by Hanford site labor through CHPRC, or other signatory Hanford site DOE prime contractors. The CHPRC provided work force shall conduct all such work force activities, such as but not limited to, equipment receipt, inspection, storage placement, warehousing, assembly, acceptance testing, and operations. In addition, CHPRC shall provide all cranes, man lifts, forklifts and operators for items that are generally commercially available per RFP_20160216TB_Part_C, Section 3.3.3. The Contractor shall provide Technical Support of these activities per RFP Part C, Section 3.4. However, Offerors shall include in their pricing any required ancillary or specialty equipment (e.g. special lifting yokes, or equipment assembly tools) that are unique to its proposed design solution and which is a specialty item, or item that is otherwise customized per the unique design solution being proposed.

Please also see the response to RFP 20160216TB, Amendment 1, question 28.

Additional updates to the RFP:

The proposal due date remains changed as May 23, 2016 at 2:00 p.m. The eSourcing Event will begin at 10:00 a.m. PST Monday, May 23, 2016 and end at 10:30 a.m. PST.

Offeror must acknowledge receipt of this amendment by stating in its proposal that the Offeror received the amendment 2 and considered the amendment in formulating its proposal.

Sincerely,

Tracey A. Burch
Contract Specialist

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Attachments 2