



**ADDENDUM NO. 3  
Issued August 24, 2010**

**TO**

**“REQUEST FOR BIDS  
FOR  
CONSTRUCTION OF A NEW JET-FUEL TANK  
AT THE  
MID-CONNECTICUT GAS TURBINE FACILITY”  
(RFB Number 11-EN-002)  
(RFB Issued July 21, 2010)**

**Note:** Bidders are required to acknowledge this and all Addenda in Section 5(a) of the Bid Form.

This Addendum consists of the following:

- (1) Changes to the Bid Price Form from the RFB Package Documents;
- (2) Changes to the specified Tank Warranty;
- (3) Revised Drawings; and,
- (4) The Connecticut Resources Recovery Authority's ("CRRA's") responses to questions received from potential bidders by August 18, 2010.

## **1. CHANGES TO THE BID PRICE FORM**

The Bid Price Form has been revised to add a new Section 5 to the Form, where bidders are invited to submit bid prices associated with alternative equipment and/or designs that bidders believe to be more cost-effective to construct and/or operate than the equipment and designs contained in the project plans and specifications. Any proposed alternative option must meet the requirements of API 650. The new Section 5 is set-up such that Bidders must describe the proposed equipment and/or design alternative, and then provide the price by which the Bidders' lump sum costs entered in Section 1 of the Bid Price Form would be decreased (or increased) if CRRA, in its sole and absolute discretion, directs the Bidder to incorporate the alternative equipment and/or design.

CRRA has also revised the Bid Price Form to correct the listed storage capacity of the existing tank to be cleaned and decommissioned, and, at CRRA's sole and absolute discretion, demolished.

The revised Bid Price Form has been posted on CRRA's web site at the following location:

[http://www.crra.org/pages/business\\_opp.htm#jettank](http://www.crra.org/pages/business_opp.htm#jettank)

## **2. CHANGES TO THE SPECIFIED TANK WARRANTY**

More than one prospective Bidder has indicated to CRRA that a one-year tank warranty is normal for the industry. While CRRA would prefer a longer-term tank warranty, it will accept a one-year tank warranty if tank manufacturers will not offer a longer warranty period, and Bidders should therefore base their bid prices on providing a one-year tank warranty in accordance with the following, revised Section 13100, part 1.6 of the technical specifications:

### **1.6 HANDLING AND WARRANTY**

The equipment and materials shall be protected during shipping and handling in accordance with the manufacturer's written recommendations. All equipment and materials shall be delivered to the site in original, unbroken and unopened crates or containers.

Provide a full, written ~~30~~-one-year warranty for each fuel storage tank. Provide a copy of the tank warranty with the submittals.

Given that CRRA is seeking a longer warranty period, Bidders are invited through the new section 5 of the Bid Price Form to offer a longer-term warranty, covering the full tank or some portion thereof, for consideration by CRRA.

### **3. REVISED DRAWINGS**

The four project drawings listed below have been revised as described. These drawings have a number “1” within the revision block with the date of 8/24/10.

(a) Drawing C-6 – Piping Layout Plan and Detail

Revision 1 of Drawing C-6 depicts a slight shift in the layout of the piping between the new tank to be constructed and the 11-1/4° bend in the piping.

(b) Drawing C-8 – Tank Layout Plan

Revision 1 of Drawing C-8 includes, but may not necessarily be limited to, revised locations for the tank platform, manual gauge board and its associated fittings, manual gauging fitting, level transmitter fitting, the stairway with railing, and the center of the tank coordinates. New features depicted on Drawing C-8 include, but may not necessarily be limited to, one 30”-diameter inner main tank shell manhole with a bolted and hinged cover, a metal railings and cleats on the roof surface leading from the platform to the center tank vent, and the tie-off cleats on the roof near the manhole. Revisions to Drawing C-8 are further described in the Responses to Questions portion of this Addendum.

(c) Drawing C-9 – Tank Layout Elevation

Revision 1 of Drawing C-9 includes, but may not necessarily be limited to, depiction of the one 30”-diameter inner main tank shell manhole with a bolted and hinged cover, and the metal railings and cleats on the roof surface leading from the platform to the center tank vent. Revisions to Drawing C-9 are further described in the Responses to Questions portion of this Addendum.

(d) Drawing E-1 – Electrical Plan

Revision 1 of Drawing E-1 includes, but may not necessarily be limited to, revised locations for the stairway, platform, outlets, lights and switches.

The revised drawings have been posted on CRRA’s web site.

#### 4. RESPONSES TO QUESTIONS

CRRA provides the following responses to questions that were received from potential bidders by 3:00 pm, August 18, 2010, the deadline in the RFB Package Documents for questions.

<b>4.1</b>	Question	A 30 year tank warranty is not standard, a one (1) year warranty is normal for the industry. Coatings, tank usage and maintenance can all effect tank life. What is expected to be covered in a 30 year warranty? Ref. Section 13100, 1.6
	Answer	<p>As described previously in this Addendum, CRRA has revised specification section 13100, part 1.6 to require a full, written one-year warranty for the tank.</p> <p>If a Bidder is willing to offer a longer-term warranty, then such warranty should be described in the new section 5 of the “Bid Price Form.” If offering a longer-term warranty for consideration by CRRA, Bidders should specify whether the warranty covers the full tank or some portion thereof (i.e., tank coatings).</p>
<b>4.2</b>	Question	Specification 13100 - 2.1.1: A cone roof tank with an independent rain shield (also with a ¾” to 12” slope) from tank shell to dike top of shell would be most applicable to this project, not an umbrella roof tank, given the product being stored and the tank geometry.
	Answer	<p>Each Bidder is to base its bid on the plans and specifications that have been developed for this project.</p> <p>As described previously in this Addendum, CRRA has revised the “Bid Price Form” to include a new section “5 - Alternative Equipment and/or Design (Optional)” where bidders are invited to submit bid prices for alternative equipment and/or designs that bidders believe to be more cost-effective to construct and/or operate than the equipment and designs contained in the project plans and specifications. Any proposed alternative option must meet the requirements of API 650.</p>

<b>4.3</b>	Question	Regarding tank design (Section 13100, 1.7), will an API 650 Storage Tank Data Sheet be provided (see API 650 Standard, Appendix L)? This data sheet would furnish complete technical tank information to tank supplier as well as protect owner regarding data provided.
	Answer	<p>Attached to this Addendum is a completed API 650 Storage Tank Data Sheet that CRRA has assembled for the purposes of this “Request for Bids.”</p> <p>When submitting its bid, each Bidder is to include a completed Storage Tank Data Sheet for “Bid” purposes from the tank manufacturer that reflects the data applicable to the tank proposed for construction.</p> <p>Submission of completed Storage Tank Data Sheets to CRRA for approval prior to tank construction and after tank construction will also be required. Therefore, the following Data Submittals are added to the list of required submittals in Specification Section 13100:</p> <p style="padding-left: 40px;">1.4.1 SD-01, Data</p> <ul style="list-style-type: none"> <li data-bbox="656 856 1453 930">f. Completed Storage Tank Data Sheet L-1 from API 650 for “Design Review” and approval prior to construction</li> <li data-bbox="656 947 1453 1052">g. Completed Storage Tank Data Sheet L-1 from API 650 to document “As-Built” conditions at the completion of tank construction.</li> </ul>

<b>4.4</b>	Question	No inner main tank shell manholes are noted, Re Section 13100, 2.2.2. I believe this should be reconsidered - not only will this potentially impact construction/painting and safety, but will potentially be problematic in regards to ongoing safety, maintenance and inspection.
	Answer	<p>Section 13100, part 2.2.2 of the technical specifications is hereby revised as follows to include one (1) shell access manhole for the inner main tank:</p> <p style="padding-left: 40px;">2.2.2 Access Manholes</p> <p style="padding-left: 40px;">One roof access manhole shall be provided and shall have a nominal diameter of 24 inches. Two shell access manholes shall be provided in the outer containment tank and each shall have a nominal diameter of 30 inches. <b>One shell access manhole shall be provided for the inner main tank and shall have a nominal diameter of 30 inches.</b> Each manhole shall be provided with a davit or hinged cover. <del>No shell manhole shall be furnished for the inner main tank.</del> One spare set of permanent gaskets for all manhole covers shall be furnished and labeled as such for each tank. The tank(s) shall be provided with all necessary gaskets, bolts, nuts, and platforms. Gaskets shall be 1/8 inch thick, full faced, and shall be compatible with the fluid in the tank.</p> <p>Additionally, drawings C-8 and C-9 have been revised to include one 30"-diameter inner main tank shell manhole with a bolted and hinged cover.</p>
<b>4.5</b>	Question	The roof platform from the stairway only extends partially up the roof. If the roof slope is too steep, it may be advisable to have a handrail or walkway to the center vent installed. Ref Drawing C-8.
	Answer	Drawing C-8 has been revised to depict installation of a double-handrail from the roof platform to the center vent, with cleats installed on the walking surface for traction.

<b>4.6</b>	Question	The 24" roof manhole is located at 250° while the roof access platform is at about 110° (Ref Drawing C-8). Would it be better for access to have the roof manhole adjacent to the platform for access, or a walkway/handrail etc. to the present location for safe access?
	Answer	<p>Drawing C-8 has been revised to depict revised locations for the roof fittings, the manhole, and the platform. Per the revised drawing, all roof fittings, the manhole and the platform will be located between approximately 245° and 270°.</p> <p>CRRA believes that the revised locations depicted on Drawing C-8 offer sufficient distance between the proposed locations of the board gauge float/cable/guide wires and the ultrasonic level sensor to ensure that the board gauge's operation will not interfere with the ultrasonic level sensor. The Contractor will be responsible to confirm that the location and operation of the board gauge float/cable/guide wires will not interfere with the proper operation of the ultrasonic level sensor before completing the installations.</p> <p>As depicted on the revised Drawing C-8, the stairway rising to the platform will rise in a clockwise direction (instead of counterclockwise) from approximately 120° to 265°.</p>
<b>4.7</b>	Question	Will CRRA provide detail on the electrical lines exiting the manhole adjacent to the site for the new tank?
	Answer	The dimensions of the electrical vault and the locations of the lines are accurately depicted on the project plans. The lines include the power supply and controls for the four pumps in the pump house plus the pump house lighting. Given the location of the vault near the edge of the excavation area for the new tank, it is imperative that the selected contractor take proper precautions to protect the vault and the lines during construction.
<b>4.8</b>	Question	Will CRRA be able to provide construction power within 50 feet of the new tank site for construction purposes? We are seeking a minimum power supply of 460 volt, 3 phase, 200 amp service.
	Answer	Yes, CRRA will be able to provide 460 volt, 3 phase, 200 amp service within 50 feet of the new tank site for construction purposes.

<b>4.9</b>	Question	With respect to the buried inactive steel fuel oil line that passes through the footprint of the new tank and that requires removal, as depicted on Drawing C-2, is this line free of product?
	Answer	Information available to CRRA indicates that the line is free of product; however, CRRA does not guarantee that the line is vapor-free or free of residues. The Contractor will need to take appropriate precautions to prevent fire or explosion when cutting and capping the line.
<b>4.10</b>	Question	Does this project require special inspections under the building code?
	Answer	It is each Bidder's responsibility to determine what, if any, special inspections may be required and to take the costs of such special inspections into account when developing its bid prices.
<b>4.11</b>	Question	<p>The project includes four primary components:</p> <ul style="list-style-type: none"> <li>• Construct new 550,000-gallon welded steel aboveground, jet-fuel storage tank;</li> <li>• Construct new welded steel, aboveground, outer containment tank;</li> <li>• Clean and decommission the existing 5,500,000-gallon jet-fuel storage tank</li> <li>• At CRRA's sole and absolute discretion, demolish the existing 5,500,000 gallon jet-fuel storage tank</li> </ul> <p>What is CRRA's budget for each of the project components identified above?</p>
	Answer	A construction cost estimate to complete this project in accordance with the plans and specifications has not yet been developed.
<b>4.12</b>	Question	What is the specific gravity of the Kerosene A fuel?
	Answer	Attached to this Addendum is the Material Safety Data Sheet (MSDS) for the Kerosene A fuel. The MSDS lists a specific gravity range of 0.79 to 0.85. As indicated in the Structural General Notes on Drawing S-1, a specific gravity of 0.85 was utilized for the foundation design.
<b>4.13</b>	Question	What is the maximum quantity of product to be stored in the existing tank when construction of the new tank is to take place?
	Answer	The maximum quantity of product to be stored in the existing tank during construction of the new tank is estimated to be 781,739 gallons, which equates to a depth of approximately 6.9 feet.

<b>4.14</b>	Question	Does the existing tank have a controlled pressure relief vent or does the tank vent directly to atmosphere?
	Answer	The tanks vents directly to atmosphere.
<b>4.15</b>	Question	Does the above ground piping between the new tank site and existing tank have any pressure relief vents?
	Answer	No. There are no pressure relief valves on the existing piping, nor are any pressure relief valves proposed on the new piping.  The pumps in the existing pump house are equipped with pressure relief valves that circulate back to the pump intakes.
<b>4.16</b>	Question	Drawing S-1 indicates that sizing is to be determined by the tank contractor, but we are assuming that diameters are to remain as shown of 50' for the tank and 60' for the dike wall.
	Answer	Yes, the depicted tank diameters are to remain.
<b>4.17</b>	Question	Drawing S-1 also indicates that bids for foundation work are to be based on the drawings with actual loads and foundations to be determined after award. Please confirm that we are not to provide an alternate foundation.
	Answer	The bid shall be prepared and submitted based upon the drawings furnished as part of the CRRA Request for Bid No. 11-EN-002, including all Addenda. The RFB includes one bid alternative for the tank founded on a Rammed Aggregate Pier system with reinforced concrete ringwalls (as shown on Drawings C-7 and S-1) and a second alternative for the tank founded on a pile supported reinforced concrete slab (as shown on Drawing S-2). Additional information on both foundation alternatives is contained in the Geotechnical Report and Foundation Technical Memorandum Addendum furnished as part of this RFB. The RFB does not request that any other foundation alternatives be provided at this time. The note on Drawing S-1 is intended to caution the Contractor to the fact that the final tank design furnished by the Contractor and approved by CRRA, may require some adjustments in the final foundation design if the design assumptions made by the engineer in preparing the RFB drawings differ from the final tank design load conditions. Any changes that may be required to the tank foundation design will be prepared by CRRA's engineering consultant and furnished to the Contractor. The Contractor will be given the opportunity to request a change order for adjustments made to the foundation design, if warranted.

<b>4.18</b>	Question	Neither Drawing S-1 nor the Specification Section 13100 shows the tank having a double bottom. We are presuming this means that the floor is continuous from the inner tank to the exterior of the dike wall.
	Answer	Yes, the floor is continuous from the inner tank to the exterior of the dike wall.
<b>4.19</b>	Question	Specification 13100 - 1.4.1.c. Indicates cathodic protection is part of the tank work; however, the cathodic protection identified is external to the tank. This is the basis of the bid package.
	Answer	There is no internal cathodic protection system requested. As described in Specification 13100, an external tank cathodic protection system will be required if the new tank is founded on a rammed aggregate pier foundation.
<b>4.20</b>	Question	Specification 13100 - 2.1.4 and 2.1.6: Both CIH and QP-1 can be provided by the painting subcontractors; however, they are out of the ordinary and will add additional cost. Offering them as options would allow you to make choices as to cost.
	Answer	CRRA believes that the CIH and QP-1 services are important in ensuring the health and safety of workers, and the quality of the coating applications; CIH and QP-1 services are not optional. Submitted bids must therefore include all applicable costs for the CIH and QP-1 services, as called for in Specification 13100.
<b>4.21</b>	Question	Specification 13100 - 2.2.2: There must be shell manholes in the inner tank to comply with API as well as OSHA requirements. Typically they are in line with the shell manholes on the dike wall.
	Answer	As indicated in Answer #4 above, Section 13100, part 2.2.2 of the technical specifications is hereby revised to include one (1) shell access manhole for the inner main tank

<b>4.22</b>	Question	Item 4 in the General Notes indicates that the Contractor is to obtain the City of Hartford Building and Fire Department Permits for construction of new tank and demolition of existing Tank #6. Question: Are there two separate permits involved, and if so what is the estimated cost of the two permits? Question: If this is a single permit, what is the estimated cost of the permit? Question: Where can the permit applications be obtained, and what is the estimated time required from submittal to receipt of permit?
	Answer	It is each Bidder's responsibility to investigate the applicable permitting requirements and to develop accurate permitting costs for inclusion in its bid prices.
<b>4.23</b>	Question	Item 5 indicates that the Contractor is to obtain Federal Aviation Permit for cranes to be used on the project. Question: If this is a single permit, what is the estimated cost of the permit? Question: Where can the permit applications be obtained, and what is the estimated time required from submittal to receipt of permit?
	Answer	It is each Bidder's responsibility to investigate the applicable permitting requirements and to develop accurate permitting costs for inclusion in its bid prices.
<b>4.24</b>	Question	Item 16 calls for the Contractor to obtain a permit for the hydrostatic tank testing from the Connecticut Department of Environmental Protection. Question: If this is a single permit, what is the estimated cost of the permit? Question: Where can the permit applications be obtained, and what is the estimated time required from submittal to receipt of permit?
	Answer	It is each Bidder's responsibility to investigate the applicable permitting requirements and to develop accurate permitting costs for inclusion in its bid prices.
<b>4.25</b>	Question	Item 19 calls for the interior of both tanks to be thoroughly cleaned and dried. Question: Please define "cleaned and dried" in this instance.
	Answer	The Contractor shall be required to broom clean the tank, wash with potable water and remove any sediment, debris and foreign material. Following completion of the hydrostatic test and settlement phase, all water shall be removed from the tank and the bottom surface standing water removed with a squeegee and/or vacuum system so that there are no standing pockets of water on the bottom surface.

<b>4.26</b>	Question	Item 20 calls for the fuel transfer to be conducted in manner to prevent the transfer of tank bottom material to the new tank. Question: Please describe how this objective will be achieved; will a filter be required in the transfer line and will that be the responsibility of the contractor?
	Answer	The fuel will be conveyed through existing piping from the existing tank, through the pumps in the existing pump house, through the new piping installed as part of this project, and into the new tank.  A filter will not be required in the transfer line.
<b>4.27</b>	Question	Item 26 calls for the sludge and tank bottom material in the existing tank to be transferred by the contractor in containers, vessels or tankers for hauling to a disposal facility. Question: What is the definition of “tank bottom material” in this case? Is it the rust that has fallen off the sides?
	Answer	“Tank bottom material” includes all material that has accumulated in the bottom of the tank. It may include, but not necessarily be limited to, fuel, water, sludge, and sediment.
<b>4.28</b>	Question	Our estimator is unable to determine the type of steel that is being used for the tank. Can you please provide?
	Answer	The material requirements are listed in section 2.2.9 of the Specification 13100, where, for example, it indicates that the shell plate is to meet the requirements of ASTM A36 (Standard Specification for Carbon Structural Steel).
<b>4.29</b>	Question	Is the most-recent tank inspection report available for review?
	Answer	Yes, PDF copies of the most-recent tank inspection reports will be posted on CRRA’s web site internet site within 24 hours of the issuance of this Addendum.

<b>4.30</b>	Question	Our standard tank dismantle procedure is based on torch cutting the steel with the paint intact. Does CRRA require lead based paint (LBP) abatement on the cut lines prior to torch cutting? Workers will be wearing proper personal protection equipment, including PAPR's and disposable clothing, and utilizing engineering controls (long torches and minimal cutting). OSHA does not require paint removal prior to torch cutting.
	Answer	<p>Specification 02010 (Aboveground Storage Tank Demolition), Part 1.2.A.8 requires that "Prior to the start of work, the Contractor shall submit a work plan that details proposed work techniques, sequences, and schedules. Work shall not commence until the Owner's Representative has reviewed and approved such work plan."</p> <p>CRRA is not in a position at this time to either approve or disapprove the use of torch cutting during tank demolition; however, CRRA likely would not allow torch cutting without pre-cutting abatement and/or some other containment/control measures to prevent the emission of lead vapors. Therefore, any proposed work plan that includes torch cutting will have to include provisions for the prevention of lead emissions.</p>
<b>4.31</b>	Question	Addendum #1, item 4.8 permits four 10-hour work days. As a demolition contractor, we truly would prefer to come to town, work 6:00am to 7:00pm for 5 days, finish this job and go home. If we are willing to pay the over time costs for one inspector, will this be allowed?
	Answer	Yes, working the proposed hours would be allowed; however, as previously stated in Section 1.5 of Specification 01010 and in Addendum #1, all deliveries for the project are to enter the site between the hours of 7:00 a.m. and 3:00 p.m., Monday through Friday.
<b>4.32</b>	Question	Addendum #1 has the prevailing wages referenced. Although we are demolition contractor, we choose to pay our employees that climb the tank as iron workers (IW). We see the IW rate as \$ 33.00 base and \$ 26.58 +a for fringe. I may have missed it, however I've been through the entire addendum and cannot find what "a" is, please inform.
	Answer	The "a" in "26.58 + a" refers to a footnote that can be found in the last section of <b>Exhibit H</b> , "Prevailing Wage Bid Package," of the Agreement. The section is entitled "Footnotes."

END OF ADDENDUM 3