ADDENDUM NO. 4

Date:         September 1, 2015
Project:      Biogas Energy Recovery System
Job No.:      14600-04

To:           All Planholders and Prospective Bidders

The following changes and/or clarifications are hereby made to the Contract Documents, and shall become a part of the Contract Documents dated July 2015.

1. Cornerstone Environmental Group (Cornerstone) prepared the following responses to address questions received from bidders in regards to the Las Gallinas Valley Sanitary (LGVSD) Biogas Energy Recovery System Issued for Bidding plan set dated July 2015:

   a. Questions received from T.V. John and Son, Inc.:

      RFI#8-1: The bid documents call for a 90 day completion schedule with liquidated damages if this is not achieved. We received a fueling system quote on Friday 8/28/15 and it will take at least 20 weeks (140 days) to get that equipment ordered, delivered and installed. Please adjust the 90 day completion time frame to at least 150 days, 180 days would be greatly appreciated.

      Answer: The duration for completion of the fueling station is consistent with what another bidders have been told as well. The skid and microturbines cannot be delayed, but the fueling station may be delayed to 150 or 180 days as suggested. The particulars of the schedule will be further refined with the selected contractor.

      RFI#9-1: The Addendum #1 added a painting note to page CP4A. Please provide a photo marked up with exact extents of the sandblasting, painting and caulking.

      Answer: Please see attached “Tank Saddle” attachment.
RFI#9-2: Please provide a paint specification and paint schedule listing all items that are to be field painted.

Answer: The only item to be painted is the tank saddle. See Plan No. CP4A for painting requirements.

RFI#10-1: One electrical subcontractor provided a scope letter and asked: Lighting and Receptacles mentioned in Square-Box Note on Drawings E4, E5, E6 are excluded because the drawings do not show this work. Please provide direction as to what is required.

Answer: Refer to revised drawings included in bid addendum #3 where the scope of the lighting has been shown and the note on E4, E5 and E6 has been removed.

RFI#11-1: We received a fueling system scope letter. Specification Section 43 is for the fueling system and includes the canopy, but the fueling system contractor excluded it from their scope. We can solicit pricing from Pre-Engineered Metal Building Contractors. Please provide a simple sketch of the canopy or canopies that are desired and include length, width, sidewall dimensions, roof slope and foundation design.

Answer: The dimensions of the canopy should meet the footprint outlined on PI1. The height of the canopy should accommodate typical truck heights. The roof should slope down towards the grassy area, not to the parking lot for drainage off of the roof. The canopy foundation should be designed for the loads expected in this area of California (seismic, wind, etc.). A pre-fabricated building contractor can provide the foundation design. Only one side wall should exist, on the northern portion of the canopy. The canopy should meet the National Fire Protection Association standards as the CNG fueling station will be underneath the canopy.

b. Questions received from Blocka Construction:

RFI#2-1: Drawing E7 notes the electrical contractor is to coordinate with Controls Engineer for the location of the SCADA Panel and VPN connection. Please provide approximate distances for these runs as they are not shown the drawings.

Answer: The BioCNG control panel will connect via Ethernet to the switch in the Headworks PLC cabinet.
RFI#4-1: Specification Section 26 05 00-12 - 1.10.A.1 lists specifications 26 22 00 and 26 24 16. We cannot find these specifications. Please clarify.

Answer: Specifications have been included with this addendum

c. Questions received from DW Nicholson Corp.:

RFI#1-1: In the bid walk they mentioned that some of the piping and items were to be painted. My painting contractor cannot find a specification or schedule of items to be painted. Please confirm what is to be painted and provide your specification.

Answer: See painting specification and “Tank Saddle” photo attachment.

RFI#2-1: On CP-1, there are (2) valves shown on the POC to the underground 3” HDPE PGE line after the meter. I am assuming one is on the 3” existing line as an isolation valve and the other is on the 1” SS line feeding the new CNG system. Are you intending those valves to be below grade? Do we need valve boxes?

Answer: The valve on the gas pipeline to the existing generator may exist, but does not need to be installed. This line will be installed above grade, with the isolation valve installed above grade. A revision to sheet CP1 is included in this addendum.

d. Questions received from Western Water:

RFI#2-1: On the Addendum 3, page 6, Section f, the answer to RFI 1-1, it says “…but 3 times the engineer’s estimate ($6,000,000) does not seem accurate.” Three times the EE would be just over $3,000,000.

Answer: Quotes were received from the manufacturers listed on the specification for the fueling station, therefore, the Engineer has a frame of reference of the estimated cost of the equipment. The canopy was not included in the original quote from the manufacturer.

This addendum consists of thirteen (13) pages including this page and attachments. Acknowledge receipt of this addendum in the space provided on page 2-5, Proposal Cover Page and Bid Schedule, of the Bid Forms, and by signing in the space provided below. Submit original copy of this addendum cover page along with the bid. Failure to do so may disqualify the bidder.
Addendum No. 4
Biogas Energy Recovery System
September 1, 2015

Las Gallinas Valley Sanitary District:  Bidder: ________________________________

Michael P. Cortez, PE, District Engineer
Tel. No. (415) 472-1033, ext. 18

(Authorized Signature)  (Date)
SECTION 26 22 00

DRY TYPE TRANSFORMERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Dry type two winding transformers [TR-1]

1.2 REFERENCES

A. NEMA - ST 1 - Specialty Transformers
B. NEMA ST 20 - Dry Type Transformers for General Applications
C. ANSI/IEEE C57.12.01 - General Requirements for Dry Type Distribution and Power Transformers
D. ANSI/IEEE C57.12.91 - Test Code for Dry Type Distribution and Power Transformers
E. NEMA TP 1 - Guide for Determining Energy Efficiency for Distribution Transformers
F. NEMA TP 2 - Standard Test Method for Measuring the Energy Consumption of Distribution Transformers
G. NEMA TP 3 - Standard for the Labeling of Distribution Transformer Efficiency

1.3 SUBMITTALS

A. Submit product data under provisions of Section 26 05 00.
B. Include outline and support point dimensions of enclosures and accessories, unit weight, voltage, KVA, and impedance ratings and characteristics, loss data, efficiency at 35, 50, 75 and 100 percent rated load, sound level, tap configurations, insulation system type, and rated temperature rise.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store and protect products under provisions of Section 26 05 00.
B. Store in a warm, dry location with uniform temperature. Cover ventilating openings to keep out dust.
C. Handle transformers using only lifting eyes and brackets provided for that purpose. Protect units against entrance of rain, sleet, or snow if handled in inclement weather.
PART 2 - PRODUCTS

2.1 DRY TYPE TWO WINDING TRANSFORMERS

A. Dry Type Transformers: NEMA ST 20, NEMA TP 1; factory-assembled, air cooled dry type transformers; ratings as shown on the drawings.

B. Insulation system and average winding temperature rise for rated KVA as follows:

<table>
<thead>
<tr>
<th>Ratings</th>
<th>Class</th>
<th>Rise (degree C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15</td>
<td>185</td>
<td>As shown on the drawings</td>
</tr>
<tr>
<td>15 or higher</td>
<td>220</td>
<td>As shown on the drawings</td>
</tr>
</tbody>
</table>

C. Case temperature shall not exceed 40°C rise above ambient at its warmest point.

D. Winding Taps, Transformers Less than 15 KVA: Two 5 percent below rated voltage, full capacity taps on primary winding.

E. Winding Taps, Transformers 15 KVA and Larger: Two (2) 2-1/2% below and two (2) 2-1/2% above rated voltage, full capacity taps on primary winding.

F. Sound Levels: Maximum sound levels are as follows:

<table>
<thead>
<tr>
<th>KVA Rating</th>
<th>Sound Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>40 dB</td>
</tr>
<tr>
<td>10-50</td>
<td>45 dB</td>
</tr>
<tr>
<td>51-150</td>
<td>50 dB</td>
</tr>
<tr>
<td>151-300</td>
<td>55 dB</td>
</tr>
<tr>
<td>301-500</td>
<td>60 dB</td>
</tr>
<tr>
<td>501-700</td>
<td>62 dB</td>
</tr>
<tr>
<td>701-1000</td>
<td>64 dB</td>
</tr>
</tbody>
</table>

G. Ground core and coil assembly to enclosure by means of a visible flexible copper grounding strap.

H. Mounting: Transformers 75 KVA and less shall be suitable for wall, floor, or trapeze mounting; transformers larger than 75 KVA shall be suitable for floor or trapeze mounting.

I. Coil Conductors: Continuous windings with terminations brazed or welded.

J. Enclosure: NEMA ST 20; Type 4X. Provide lifting eyes or brackets.

K. Isolate core and coil from enclosure using vibration-absorbing mounts.
L. Nameplate: NEMA TP 3; Include transformer connection data and overload capacity based on rated allowable temperature rise.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Set transformer plumb and level.

B. Use flexible conduit, 2 feet minimum length, for connections to transformer case. Make conduit connections to side panel of enclosure.

3.2 FIELD QUALITY CONTROL

A. Check for damage and tight connections prior to energizing transformer.

B. Measure primary and secondary voltages and make appropriate tap adjustments. Adjustments shall be made at completion of project and at approximately 6 months following project acceptance when requested by the Owner.

END OF SECTION
SECTION 26 24 16

PANELBOARDS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Lighting and appliance branch circuit panelboards: [Panel ‘L2’], [Panel ‘L3’]

1.2 RELATED SECTIONS AND WORK

A. Refer to the One-Line Diagram and Panel Schedules for size, rating, and configuration.

1.3 REFERENCES

A. NEMA AB 1 - Molded Case Circuit Breakers
B. NEMA FU 1 – Low voltage cartridge fuses
C. NEMA KS 1 - Enclosed Switches
D. NEMA PB 1 - Panelboards
E. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less
F. NEMA PB 1.2 - Application Guide for Ground-fault Protective Devices for Equipment
G. UL 248 – Low-Voltage Fuses
H. UL 67 - Panelboards

1.4 SUBMITTALS

A. Submit shop drawings for equipment and component devices under provisions of Section 26 05 00.
B. Include outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.
C. Selective coordination study to prove that all essential electrical systems, emergency systems and legally required standby system panelboards are selectively coordinated with all supply side overcurrent protective devices.
1.5 SPARE PARTS

A. Keys: Furnish four (4) each to the Owner.

PART 2 - PRODUCTS

2.1 RATINGS

A. Definitions:

1. Series rated equipment shall be defined as equipment that can achieve a required UL AIC rating with an upstream device such as a main breaker or a combination of devices to meet or exceed a required UL AIC rating. All series rated equipment shall have a permanently attached nameplate indicating that device rating must be maintained. See Section 26 05 53 for additional requirements.

2. Fully rated equipment shall be defined as equipment where all devices in that equipment shall carry a minimum of the AIC rating that is specified.

B. The panelboards for this project shall be fully rated unless otherwise specifically noted in the Drawings or Specifications.

2.2 BRANCH CIRCUIT PANELBOARDS

A. General

1. Approved Manufacturers:

   a. Square D NQ, NF
   b. General Electric AQ, AE
   c. Siemens P1
   d. Cutler Hammer PRL1, PRL2

B. Lighting and Appliance Branch Circuit Panelboards: NEMA PB 1; circuit breaker type.

C. Enclosure: NEMA PB 1; Type 4X.

D. Provide cabinet front with hinged trim and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.

E. Provide panelboards with copper bus, ratings as scheduled on the drawings. Provide copper ground bus in all panelboards.

F. All unlabeled circuits shown on the panelboard schedule shall be fully prepared spaces for future breakers.
G. All multiple-section panelboards shall have the same dimensional back box and cabinet front size.

H. Minimum Integrated Short Circuit Rating: As shown on the drawings.

I. Provide handle lock-on devices for all breakers serving exit sign and lighting circuits with emergency battery units. Provide handle lock-on devices and red handles for breakers serving fire alarm panels.

J. Molded Case Circuit Breakers: Bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled on the drawings. Do not use tandem circuit breakers.

K. Current Limiting Molded Case Circuit Breakers: Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical amperes, let-through current and energy level less than permitted for same size Class RK-5 fuse.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install panelboards plumb as indicated on the drawings in conformance with NEMA PB 1.1.

B. Height: 6 feet to handle of highest device.

C. Provide filler plates for unused spaces in panelboards.

D. Provide typed circuit directory for each branch circuit panelboard. Label each circuit with the type of load and the name and number of the area served. Revise directory to reflect circuit changes required to balance phase loads.

3.2 FIELD QUALITY CONTROL

A. Measure steady state load currents at each panelboard feeder. Should the difference at any panelboard between phases exceed 20 percent, rearrange circuits in the panelboard to balance the phase loads within 20 percent. Take care to maintain proper phasing for multi-wire branch circuits.

B. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.