



ADDENDUM NUMBER 1

MARLAY TAYLOR WRF METHANE POWER CO-GENERATION AND DIGESTER UPGRADE

**ST. MARY'S COUNTY METROPOLITAN COMMISSION
CONTRACT # 8091SF**

The following supplementary information, data and corrective notations are hereby made a part of this project. Bidders are responsible for notifying all of their suppliers and subcontractors regarding the information contained in this, and any other addenda.

PRE-BID CONFERENCE:

A Pre-Bid Conference was held on August 25, 2009 at 10:00 A.M. at the main offices of the St. Mary's Metropolitan Commission (MetCom), located at 43990 Commerce Ave, Hollywood, MD 20636.

The following were in attendance at the conference:

<u>Name</u>	<u>Representing</u>	<u>Phone</u>
Chet Frederick	MetCom	(301) 373-4733
Mike Sullivan	MetCom	(301) 373-4733
DuWayne Potter	MetCom	(301) 863-5143
Christy Sterling	MetCom	(301) 373-4733
Joy Hamlet	MetCom	(301) 373-4733
Dave Masteller	MetCom	(301) 373-4733
Steve Engleson	MetCom	(301) 373-4733
Dan Ichniowski	MetCom	(301) 373-4733
Larry Petty	MetCom	(301) 373-4733
David Blevins	Thompson & Litton	(276) 646-5050
Aaron Briggs	Dewberry	(410) 265-9500
Gary Farmer	Alban Engine Power Systems	(410) 579-4452
Tom Hood	WM Schlosser	(301) 773-1300
Michael Boswell	MBE&C, LLC – Nixon Energy	(240) 344-8770
Ron Davis	Partner's Electric	(301) 850-6647
Simon Jimenez	Norair Eng. Corp.	(301) 499-2202
Tom O'Leary	Crowder Construction	(919) 367-2000
Bernard Petrauskas	Cianbro Corp.	(410) 636-3000
Andy Vickers	Cianbro Corp.	(410) 636-3000
Sherman Artis	The Artis Group	(770) 498-7727
Ned Beshore	Johnston Const Co	(717) 292-3606
Tony Jannotta	Curtis Engine	(240) 472-7766
Nate Leyburn	Whiting-Turner Contracting Co.	(410) 337-6915
Chris Collins	Whiting-Turner Contracting Co.	(410) 821-1100
Nick Winn	Whiting-Turner Contracting Co.	(410) 821-1100
Nick Bentley	JLW Associates	(301) 475-5747
Mark Warehime	Shaney Construction Co	(410) 366-5110

The following items were discussed at the conference:

- 1) Brief introductions of people representing the Owner and Engineer were made.
- 2) The Owner of this project is The St. Mary's County Metropolitan Commission (Owner, Commission, MetCom, etc...). The following individuals are appointed as authorized representatives for the Commission; Jacquelyn Meiser – Director, Joy Hamlet – Purchasing Agent, Chet Frederick – Contract Manager.
- 3) The Engineer of Record for this project is Dewberry & Davis, LLC (Engineer). The following individuals are appointed as authorized representatives for the Engineer; Thomas DallaPalu – Project Director, Aaron Briggs – Project Manager.
- 4) Work on this project includes, but is not limited to, furnishing and installing two (2) anaerobic digester gas co-generation electric power facilities, a 49,000 cubic foot gas storage balloon structure, a prefabricated control building, biogas purification and pressure boosting facilities and associated yard piping, electrical conduits and site work. Improvements to the anaerobic digesters includes the replacement of two (2) primary digester fixed steel covers, optimization of the mixing systems, addition of foam suppression to the two (2) primary digesters and the addition of new level sensing equipment to all three (3) existing digesters including associated piping and electrical/instrumentation work.
- 5) Sealed Bids will be received at the main office of the Commission until 2:00 P.M. local time on September 23, 2009 at which time all Bids received will be opened and read aloud. The Bid date WILL NOT be extended for this project.
- 6) The Bid Package consists of forty-two (42) drawings and two (2) volumes of Bid Documents/Project Specifications all dated August 11, 2009. Any Addenda issued will also become part of the Bid Package.
- 7) Copies of the Bid Package are available for purchase from the Engineer at the cost of \$100. Only firms purchasing the Bid Package are assured to receive copies of any Addenda issued prior to Bid Opening.
- 8) Funding for this project will be procured through the American Recovery and Reinvestment Act of 2009 (ARRA). As such, The Maryland Department of the Environment Disadvantaged Business Enterprise (DBE) Program, Davis-Bacon Act and the "Buy American" Requirement of ARRA are an integral portion of this Contract. Failure to follow ALL necessary guidelines and submit ALL proper required documentation could render the bid non-responsive.

MetCom has recently had to reject a Bid due to the fact that a Bidder did not provide all necessary DBE paperwork. Bidders are advised to document all phone calls, faxes, emails, etc... related to attempting to obtain appropriate DBE participation in the project and to show all documentation related to these goals. Bidders must advertise on SBA and minority websites.

- 9) Project Award will be made to the Responsible, Responsive Bidder who submits a Bid that best serves the interest of The Commission. Criteria considered in evaluating the Bids, in no particular order shall be; compliance with the "Buy American" provisions of

ARRA, price, quality of the goods or services to be provided, and Bidder's previous experience on similar Work.

- 10) Project Award (Notice of Intent) will be made after timely receipt of all Post-Bid documentation required and upon approval by the Commission Board.
- 11) Notice To Proceed (NTP) to the successful Bidder is anticipated on or around December 21, 2009. Construction MUST commence prior to the end of calendar year 2009 in order to maintain funding.
- 12) All work required for this project shall be completed within two hundred forty (240) [Changed to three hundred (300) below] consecutive calendar days from NTP (Contract Term). Liquidated Damages in the amount of \$500 will be assessed every day beyond the end of the Contract Term that the Work remains incomplete.
- 13) Construction hours will be limited to 7:00 AM to 4:00 PM, Monday thru Friday. No construction will be allowed on Sundays or Commission recognized holidays without appropriate prior approval.
- 14) All questions pertaining to the Bid Package shall be submitted in writing to the Engineer's attention on or before September 8, 2009 in order that they can all be addressed and issued to all Bidders who have purchased a copy of the Bid Package. Verbal questions will not be accepted, nor will any verbal comments provided by any party be considered binding. Written questions shall either be mailed to Dewberry & Davis, LLC, Attention Aaron Briggs, 3106 Lord Baltimore Drive, Suite 110, Baltimore, MD 21244 or by email to abriggs@dewberry.com
- 15) All prospective Bidders shall familiarize themselves, to their own satisfaction, with the terms and conditions under which the Contract will be performed and with the existing conditions in areas where work will be performed. On site inspections can be coordinated through the Engineer in order that Bidders can make whatever determinations they deem necessary to make a complete and accurate Bid. Failure to make whatever evaluations are necessary to understand the Conditions of the Work and prepare a comprehensive Bid will not relieve the successful Bidder of any responsibilities and shall not result in an adjustment to the Contract Term or Price.
- 16) No soil borings were taken specifically for this project. Subsurface information obtained from previous projects at the facility site was assembled and has been included as Volume 2 of the Bid Package. Bidders shall make their own on-site investigations of subsurface materials and conditions and shall base their Bids upon their own findings.
- 17) Bidders are advised that the Marlay Taylor facility has been in service for more than forty (40) years and has undergone numerous upgrades. While an attempt was made to show the locations of existing utilities, none have been confirmed through field location. The successful Bidder will be responsible for locating all buried utilities, both shown and not shown, as necessary to prosecute the Work.
- 18) The Marlay Taylor WRF presently serves around 30,000 users and must remain fully operational during all phases of construction. The successful Bidder shall coordinate all of his construction activities closely with the Engineer's on site representative to ensure that service is not disrupted.

- 19) All work shall be conducted in accordance with all Local, State and Federal Codes, Laws and Regulations.
- 20) To date, the MDE Construction Permit and St Mary's County LUGM and Health Department Approvals have been obtained. Forthcoming Approvals are anticipated from St. Mary's County DPW&T (SWM) and Soil Conservation District (SEC) as well as the Critical Areas Commission. All other Permits/Approvals that may be required are the responsibility of the successful Bidder.
- 21) A drainage sump in the existing swale contains a pumping system that will be removed by MetCom prior to construction initiation. Sump structure may be either removed or abandoned in place as appropriate by the successful Bidder during construction.
- 22) Bidders are advised that the contents of the digesters contain, among other things, methane gas which may be extremely flammable and/or explosive. All necessary precautions shall be taken in order to guarantee a safe working environment. Bidders have the opportunity to take sample(s) from the digester(s) to make their own judgment(s) as to the material, condition and/or quantity of the digester contents.
- 23) Bidders are advised that the contents of the digesters will be quite odorous. All materials removed from the digesters during the Work shall be done so with extreme caution to prevent release of odorous compounds into the atmosphere. The successful Bidder will be responsible for all costs to suitably haul and dispose of all materials removed from the digesters.
- 24) Page 2 of the *Table of Contents* was inadvertently left out of the Specifications by the copy service. Copies of this page were available at the meeting and will also be included with Addendum Number 1.
- 25) A site visit was held immediately following the Pre-Bid Conference.

The following questions were asked at the conference:

Question: What are the requirements for obtaining a Building Permit?

Answer: Bidders will need to coordinate this effort with the St. Mary's County LUGM. It is our understanding that the Building/Electrical/Plumbing Permit is a 4-week process.

Question: There are a number of concrete cleaning/repair methods specified that vary widely in cost to perform. Because method selection appears to be at the discretion of the Engineer, it will be difficult to put an accurate unit bid price on crack and/or spall repair items.

Answer: The role of the Engineer will be to concur with the "condition survey" prepared by the Contractor's Maryland Registered Professional Engineer. The Specifications allow for a variety of methods of cleaning and/or repair that may be employed on this project; however the Engineer will not direct which of these methods shall be used on any specific portion of the repair work. Once the damaged areas have been delineated and the "condition survey" concurred with, the Contractor shall be responsible for the means and methods of performing the Work in a manner that meets the requirements of the Specifications.

Question: Who is responsible for obtaining the Air Permit for the generators?

Answer: An air pollution operating permit is not required for this installation for the equipment size and type specified.

Question: Are structural and/or Shop Drawings for the existing digesters available for reference?

Answer: Digester design drawings and a Shop Drawing for the original Primary Digester No. 1 have been located and will be included with this addendum for reference. Neither the Owner nor Engineer makes any guarantee as to the accuracy or completeness of these drawings. Bidders shall make their own determinations prior to preparing their Bids. Please note that these drawings have all been provided on 11x17 format which is different from their original size(s) and therefore any scales listed on the drawings are not valid.

Question: Has a disposal site for the digester contents been identified?

Answer: No specific site has been identified. It is the Bidders responsibility to make arrangements for appropriate disposal. Presently, MetCom contracts sludge removal and land disposal with Synagro. It is our understanding that landfills in Maryland may not accept sludge, but some landfills in Virginia will.

Question: When were the digesters last cleaned and what quantity of material was removed?

Answer: All digesters were cleaned as part of a solids handling project in 2005. Each primary digester has an approximate volume of 440,000 gallons, but it is the Bidder's responsibility to ascertain the quantity and quality of materials to be removed for this project prior to preparing his Bid.

Question: Would the Commission consider adding a Unit Bid line item to the Contract for disposal of the digester contents?

Answer: Digester content removal and disposal will remain incidental to the Work and will not be paid for as a line item. It is the Bidder's responsibility to include all appropriate costs for removal and disposal of the contents in his Bid at no additional cost to the Owner.

Question: How much water is available on site for digester testing?

Answer: Digester cover testing is required per Specification Section 13232, 3.06. Non-Potable (treated effluent) water is available on site in sufficient quantity for testing and can be provided to the Contractor at no cost. As an alternate to the testing procedure specified, if desired, the Contractor will be allowed to test for gas-tight construction by means of raising the air pressure in the vessel to the specified limit (without water) and performing the checks as specified.

Question: Will temporary power service be readily available? Can facility power be used for start-up of the mechanical equipment?

Answer: Subject to reasonable use the Contractor may obtain power for small hand tools and a project trailer from the existing MetCom system. The Contractor shall make arrangements for

service from SMECO for other loads and/or equipment. The Contractor shall make all provisions for installation of the electric power and restore all facilities at the completion of the project per the Specifications. Facility power is also appropriate for use during start-up of installed mechanical/electrical equipment.

Question: The lead time required for the digester covers may cause a project delay; will the Contract Term be extended?

Answer: We understand that Shop Drawings can be prepared by the material supplier after Notice of Award and before Notice to Proceed. This will allow for early approval of the cover materials. Shop fabrication time is expected to be 12 to 14-weeks. However, the Commission is agreeable to revising the Contract Term such that all work for this project shall be completed within three hundred (300) consecutive calendar days from NTP.

Question: Can the required letter from the Bonding Company guaranteeing Performance and Payment Bonds be prepared by the Bonding Agent?

Answer: Yes.

Question: Can retainage be held in lieu of submitting a Maintenance Bond?

Answer: No, a Maintenance Bond is required.

Question: What certifications need to be made related to the Buy American provisions?

Answer: It is the Owners expectation that all iron, steel and manufactured goods to be provided for this project are produced in the United States. Bidders **MUST** include with their Bids a Statement of Certification that all iron, steel and manufactured goods to be provided meet the requirements of "Buy American". A list of all iron, steel and manufactured goods that do not meet these requirements shall be included with the Statement. Bidders are referred to "REQUIREMENTS AND CONTRACT PROVISIONS FOR PROJECTS FINANCED THROUGH THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA) MARYLAND DEPARTMENT OF THE ENVIRONMENT (GRANT)" insert included in the Contract Documents, specifically Item IV, which refers to actions that the Owner may take regarding Bids containing manufactured goods not produced in the United States.

WRITTEN QUESTIONS:

The following written questions were received prior to the deadline:

Question: The pH injection systems shows a pH balancing tank which controls the pH of the mixed water going into the purifier. However, it is unclear as to whether the drip water is to be monitored or if the injection of the control water is done manually. Please verify.

Answer: The pH system as shown and specified is being deleted from the project and replaced with a sodium carbonate solution pot feeder. Further details are provided below in the "SPECIFICATIONS" and "DRAWINGS" portions of this Addendum.

Question: The air mixing system is defined as being in a "Fiberglass NEMA 7 panel". Most NEMA 7 panels are aluminum and we have been unable to locate one in fiberglass. In

addition, we do not recommend putting the air blower in an explosion-proof panel as it will not have anywhere to source the air.

Answer: The NEMA 7 fiberglass panel will be replaced with a NEMA 12, aluminum panel. Further details are provided below in the "SPECIFICATIONS" portion of this Addendum.

Question: There is a drip trap shown on Drawing M-7 with what appears to be an insulating system. However, this is not defined in the specifications, in addition to the location. Can you provide more information on what is required?

Answer: See Detail 5 on Sheet M-7.

Question: Please provide the projected season gas production curve.

Answer: A projected season gas production curve was not developed and is therefore not available. Theoretical calculated values were developed for the average and maximum conditions only.

Question: Please provide local electricity tariff or copy of recent bills for the site.

Answer: Copies of electrical billing data for the months of December 2008 through May 2009 has been enclosed for reference. Neither the Engineer nor Owner make any claims as to the applicability of this information related to this project.

Question: Please provide guidance on the temperature of the available cooling water on the site: water quality, temperature and pressure.

Answer: No reliable, cost effective source of cooling water exists at the Marlay Taylor WRF. Further, the additional infrastructure costs to support a cooling water system can be expected to overshadow any savings gained through the use of a water cooled co-generation system.

Question: Please verify that proposing one (1) 330 kW co-generation package in lieu of two (2) 160 kW packages will be acceptable.

Answer: Provision of a single, larger (330 kW) co-generation package will not result in maximization of energy usage/credit by the Owner within the rights of net metering regulations. Because the individual 160 kW systems are intended to serve separate metered services (blower building and control building) and are sized to closely match the demands of these metered services, backfeeding into the electrical grid will be minimized thereby reducing "overproduction" of energy which the Owner would not receive credit or compensation for. While a single 330 kW unit will produce a similar amount of power, it would only be able to serve a single meter location because it cannot be synchronized simultaneously with the phase of two distinct services, meaning that while it produces excess energy that is fed back into the grid at one location, the Owner will continue to pay for energy at the other location. Therefore, a single larger set in lieu of the two smaller units will not be acceptable.

Question: What should the Contractor/Subcontractor/Vendor do In the event specified vendors cannot meet the requirements of the ARRA's American Iron, Steel, and Manufactured Goods Requirement." And, "Will all material incorporated into the project by the general contractor, subcontractor, and vendors require monthly Buy American certifications to be submitted as a condition for payment?

Answer: It is anticipated that all materials supplied for this project will meet the conditions of the ARRA's American Steel, Iron and Manufactured Goods requirement. If it is determined by the Contractor that a specified vendor is incapable of meeting the requirement, the expectation is that Bidders will endeavor to prepare their Bids with an equal substitution that is capable of meeting the criteria. In the event that it is not possible to provide iron, steel and manufactured goods that meet the requirement, Bidders shall list the item(s) as exclusions to their Certification of meeting the requirement and include this documentation with their Bids. The Owner is entitled to use this information to their best interest when judging the favorability of the individual Bids.

Question: The "3" HWS and 3" HWR" lines shown on drawing C-2 are not listed on the Pipe Schedule shown on M-9. Will this be the Perma Pipe spec'd in section 11205 2.08? Also please provide pipe schedule information to properly quote this portion of the job.

Answer: These are the last items in the pipe schedule on Sheet M-9 and are the Perma Pipe or equivalent conduit system.

Question: The "1 1/2" & 1 1/4 Drain Force Main" line shown on drawing C-2 is not listed on the Pipe Schedule shown on M-9. Will the line size for the Drain Force Main be 1 1/4" or 1 1/2"? Please provide pipe schedule information to properly quote this portion of the job.

Answer: This should be 1-1/4" size ASTM F 714 Class 150 polyethylene. It's noted in Spec 11205, 2.02H but was omitted from the pipe schedule.

Question: Spec section 11205.3.14 titled "Pipe Table" says to "see the following pipe tables", there are no pipe tables. Please provide these pipe tables.

Answer: The pipe table is shown on Sheet M-9.

Question: Confirm that the Drain lines are to be Schedule 40 PVC.

Answer: Schedule 40 PVC is acceptable for underground drain piping.

Question: On contract dwg M-3/Sect A, the overall dimension for the Gas Membrane was cut off. Please provide.

Answer: This dimension fell under the sheet border. It's 51'-2".

Question: Provide submittal data with mfr's name and model number of the existing combination valves shown on drawing D-1 to be refurbished and reinstalled.

Answer: The existing combination valves were supplied by Varec. Each valve assembly consists of one (1) 4-inch safety selector valve (P/N VB-SVR-1605B-ASTO) and two (2) 4-inch Pressure Vacuum Relief Flame Arrestors (P/N 5811B41S). Note that additional reference to this effect is provided below in the "SPECIFICATIONS" section of this Addendum.

Question: Contract drawing M-7/Detail A calls for "expansion pads" under the HWS & HWR lines. Please provide a spec for this material. And the extent of its use, i.e. does the contractor put this pad the entire length of the pipes or at certain intervals.

Answer: Expansion pads shall be provided (type and location) as recommended at expansion joints by the district heating piping (Perma-Pipe) supplier.

Question: Contract drawings M-2 & PID-5 for the Heating water pumps do not show check valves or expansion joints in the piping, will these items be required?

Answer: Check valves are shown on Detail 4, Sheet M-7 and expansion provisions for the hot water piping are noted on Sheet ME-1 note 5 and as specified in 11205 paragraph 2.08. Flex connectors may also be needed at the two circulating pumps for final alignment.

Question: Contract drawings ME-2 & PID-6 do not show shut off valves or expansion joints at the Cogen, Intercooler radiator & Water jacket radiator. Will these piping appurtenances be required?

Answer: Provide shut off valves and expansion joints at the generator for each line.

Question: Please provide details for the Drip Sump and LP Gas Drip Sump shown on contract drawings ME-2 & PID-4.

Answer: The drip sump shall be a precast concrete sump equivalent to Maryland State Highway Administration Detail 374.85, STANDARD ADA COMPLIANT SINGLE INLET GRATE with grate 374.85-01. Set the sump with a 3'-6" depth and with the grate at least 2-inches above surrounding grade so that it does not receive surface drainage. Extend a 2-inch drain from the bottom of each sump to the pump station. A copy of the standard detail has been enclosed with this Addendum.

Question: Section 13235 Part 1. 1.01 Summary A.1.f. States that contractor shall not be permitted to use the owner's facilities for on-site dewatering or storage ... Is it acceptable to bring a mobile press on site? Can the facility provide 125 amps service at 460 3phase electric? Does the facility have a hydrant or water line that can provide 125 gpm @ a minimum 40 psi water for the mobile press unit?

Answer: Contractors are not precluded from using their own equipment to locally dewater the digester contents prior to hauling off-site. Electrical power service for this type of operation shall be provided by the Contractor. An existing non-potable (treated effluent) water system is available on site and the Contractor shall be permitted free access to use it. Generally, the non-potable system puts out water at 65 psi, and while 125 gpm is typically available, continuous flow cannot be guaranteed. Water is drawn out of the facility effluent pump station which can be drawn down to a level where the non-potable pumps will be disabled. Any on-site dewatering shall be performed in a manner consistent with an approved odor control plan.

Question: On sheet 23 (PID-3) a new sludge recirculation pump is indicated. Where is this pump specified and layout shown?

Answer: The pump labeled "NEW SLUDGE RECIRCULATION PUMP" is a typo. The correct label should read "EXISTING SLUDGE RECIRCULATION PUMP". There is no requirement for a sludge recirculation pump on this project.

Question: On sheet 13, "PARTIAL MECHANICAL PLAN - EXISTING NORTH CONTROL BUILDING", new motor operated valves are shown. Where are these valves specified?

Answer: The specification is added below in the "SPECIFICATIONS" portion of this Addendum.

Question: On sheet 17, "PLAN, GAS CONDENSATION AT SECONDARY DIGESTOR", motor operated valves are shown. Where are these valves specified?

Answer: The specification is added below in the "SPECIFICATIONS" portion of this Addendum.

Question: In spec section 11337 para. 2.06, it calls for a combustible gas detection system for the Gas Purifiers Enclosure. Where is enclosure shown and specified?

Answer: The gas detection system has been deleted from this project. Further detail is provided below in the "SPECIFICATIONS" and "DRAWINGS" portions of this Addendum.

Question: Drawings show drip sumps with drip traps, valves, flame arrestors and prv's. Where are these detailed and specified?

Answer: The flame arrestors and PRV's and valves are specified in Section 11335, Paragraph 2.04. Information on the drip sump is given in response to a previous question and the enclosed SHA Detail. The drip trap is detailed as Item 5 on Drawing M-7 and shall be an automatic type with cast aluminum body, with stainless steel hardware and components, Shand & Jurs model 97110, or equal.

Question: Please advise what material to use for the RDS line shown on contract drawings M-4 & M-5. The pipe schedule on M-9 does not address this line

Answer: Flanged DIP is to be used for sludge piping as indicated in Specification Section 11200 – DIGESTER PIPING, VALVES AND APPURTENANCES.

Question: Contract drawing PID-3: There are two boxes indicating "new work" and there are "proposed foam nozzles that are new work shown on M-5. Are the two motorized valves FV-651 & FV652, the two pressure indicators, the FE/FIT 500, and associated manual valves and pipe, also be new work? If this is new work please provide line sizes and installation location.

Answer: On PID-3, the new work consists of that shown inside the boxes labeled "new work" and the proposed foam nozzles and piping, etc. The two motorized valves, pressure indicators and associated valves, piping, etc... are existing and no new work is intended for these items.

Question: Can a split faced CMU block building be provided in lieu of the precast structure?

Answer: Neither the Owner nor Engineer would have an objection to provision of a split faced CMU building in lieu of the specified construction providing it meets the technical requirements of the Contract Documents and MetCom's Design Manual and Standard Construction Details, and all engineering and/or design required to provide the alternate are completed by the Contractor at no additional cost to the Owner.

Question: Is an adequate free source of potable water available on site to clean the digester tanks and accomplish the required contract work?