



OKLAHOMA MUNICIPAL POWER AUTHORITY

CHARLES D. LAMB ENERGY CENTER

**RAW/FIRE WATER AND DEMINERALIZED WATER
FIELD-FABRICATED TANKS**

PONCA CITY, OKLAHOMA

Bid Opening: May 13, 2013

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NOTICE TO BIDDERS

**Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center (CDLEC)
Raw/Fire Water and Demineralized Water Field-Fabricated Tanks
Ponca City, Oklahoma**

NOTICE is hereby given that sealed Proposals will be received by the Oklahoma Municipal Power Authority (Owner) at 2701 West I-35 Frontage Road, Edmond, Oklahoma 73013 until 3:00 p.m. Local Time, on May 13, 2013 for furnishing the Work described in the Contract Documents. Proposals will be opened and publicly read aloud at 2701 West I-35 Frontage Road, Edmond, Oklahoma.

**Charles D. Lamb Energy Center
Raw/Fire Water and Demineralized Water Field-Fabricated Tanks**

The Work to be done under this contract includes, but is not limited to, furnishing f.o.b. jobsite, complete in accordance with the plans and specifications, the following:

The bidder shall engineer, design, procure, manufacture, furnish, deliver f.o.b. freight prepaid to the CDLEC project site, and erect the specified tanks (one (1) field-fabricated tank for raw/fire water system and one (1) field fabricated tank for demineralized water system) as outlined in the specifications provided by Owner's Engineer, Sargent & Lundy.

The Contractor shall furnish all engineering, labor, tools, equipment and insurance and all other items required for a complete installation of the materials required to complete the project.

Bids may be filed with Mr. Umesh Sadalge, Senior Facilities Engineer, Oklahoma Municipal Power Authority, 2701 West I-35 Frontage Road, Edmond, Oklahoma 73013, up to 3:00 p.m. of said day, at which time they will be opened and publicly read. Any bid received after the closing time will be returned unopened.

Bids received more than ninety-six (96) hours excluding Saturdays, Sundays and holidays before the time set for the opening of bids or bids received after bid deadline will be returned unopened.

Each bid must be accompanied by a certified check drawn on a solvent bank of the State of Oklahoma made payable to the Oklahoma Municipal Power Authority, in a sum equal to five percent (5%) of such bid, or at the option of the bidder, he may furnish a bid bond in lieu of the certified check, which bond shall be issued by a company authorized to do business in the State of Oklahoma.

No bid may be withdrawn for at least forty-five (45) days after the scheduled closing time for receipt of bids.

A complete set of bid documents regarding this project can be obtained from Umesh Sadalge, Senior Facilities Engineer, Oklahoma Municipal Power Authority, at 2701 West I-35 Frontage Road, Edmond, OK 73013, by telephone at (405) 359-2519, or by e-mail to usadalge@ompa.com.

The bonds required will be a Statutory Bond (See 61 O.S. §1), a Performance Bond, and a Maintenance Bond in the full amount of the contract (See 61. O.S. §113). Please see Part 2, General Conditions, Section 205.

All bids must be made on the proposal forms furnished by the Owner and must be in accordance with the "Requirements for Bidding and Instructions to Bidders."

The Owner will require of every Bidder, before his bid is considered for award, that it submits the following qualification information.

- a. Experience list for the past five (5) years, identifying the projects, location, address, contract amount, percent complete and any litigation, for work of the same character and magnitude performed.
- b. Three references complete with names, address, and phone numbers, for the three most recent projects.
- c. Business and technical organization.
- d. Financial resources available and to be used in performing the contemplated work.
- e. A bid bond in the amount of five percent (5%) of the bid shall accompany each bid. (See 61 O.S. §107(A)(1)).

Each bidder shall have such information, together with a recent financial statement, attached to its bid when received.

The Owner reserves the right to evaluate bids and reject any and all bids.

Oklahoma Municipal Power Authority

By: s/Cindy Holman, General Manager

By: s/Andrea Simmons, Ass't Secretary (SEAL)

PART 1 - PROCEDURES AND LEGAL

SECTION 102 - INSTRUCTIONS TO BIDDERS

102.01 DEFINITIONS

Words used in the Contract Documents shall be as defined in the General Conditions and the Special Conditions.

102.02 EXAMINATION OF DOCUMENTS AND SITE

- a. Each bidder shall thoroughly examine and be familiar with the Contract Documents. Submission of a Proposal shall constitute an acknowledgment upon which the Owner may rely that the Bidder has thoroughly examined and is familiar with each of the Contract Documents. The failure or neglect of a Bidder to receive or examine any Contract Document or any part thereof shall in no way relieve it from any obligations with respect to its Proposal or to the Contract. No claim for additional compensation shall be allowed which is based upon a lack of knowledge of any Contract Document.
- b. Each Bidder shall thoroughly examine and be familiar with the Project site and its improvements. Submission of a Proposal shall constitute an acknowledgment upon which the Owner may rely that the Bidder has thoroughly examined and is familiar with the Project site and its improvements, both as to surface and subsurface conditions, and that it waives any claim for any discrepancy between the site and its improvements and the Contract Documents. The failure or neglect of a Bidder to fully familiarize itself with the Project site shall in no way relieve it from any obligations with respect to its Proposal or to the Contract. No claim for additional compensation will be allowed which is based upon lack of knowledge of the Project site and its improvements.

102.03 INTERPRETATIONS

No oral interpretations will be made to any Bidder as to the meaning of any of the Contract Documents. Every request for interpretation shall be made in writing and delivered to the owner 10 days or more before the time last announced for opening Proposals. Every interpretation made to Bidders shall be in the form of an Addendum which, if issued, will be sent by Registered or Certified United States Mail as promptly as is practicable to all parties to whom the Contract Documents have been issued. All such Addenda shall become part of the Contract Documents.

102.04 FORM OF PROPOSAL

The Owner's original of each Bidder's Proposal shall be submitted upon the Proposal form found in Section 103 bound in a complete set of the Contract Documents. No copies or loose sheets shall be submitted. Each Proposal shall give the amount bid in figures and, when required, in words. Each Bidder shall submit four original bound Proposals enclosed in a sealed envelope marked "PROPOSAL" with the full name of the Project and the number of the Contract being bid as shown on the cover of the Contract Documents, the date and time for opening, the name and return address of the Bidder, and shall be addressed to the Owner at the location last announced for receipt of Proposals.

102.05 COMPLETENESS OF PROPOSAL

- a. Each Bidder shall quote on all items in the Proposal form for items which may be basic units of construction, integrated units of construction, alternative prices, additive prices, deductive prices, or a combination thereof, except for optional items on which no bid is intended. Failure to do so may result in the Proposal being rejected as not responsive.
- b. When quotations on certain items are optional, Bidders shall insert the words "no bid" in the space provided for any items for which no offer is made.
- c. Each Proposal shall include specific acknowledgment of receipt of all Addenda issued during the bidding period. Failure to do so may result in the Proposal being rejected as not responsive.
- d. Each Bidder shall furnish such supplemental information relating to its experience, personnel, equipment and business as is required by the Proposal form. Failure to do so may result in the Proposal being rejected as not responsive.
- e. Additional technical data furnished by a Bidder, but not required by the Contract Documents, may at the Owner's option be considered a part of the Proposal to the extent that it is supplementary to, is consistent with and not contrary to the Contract Documents.

102.06 ALTERATIONS IN PROPOSAL

Except as otherwise provided herein, Proposals which are conditional in any way, or which contain erasures or interlineations not authenticated as provided herein, or which contain items not called for, items not in conformity with applicable laws, changes, additions, recapitulations, or any other modifications of the Proposal form which are not specifically called for in the Contract Documents, may be rejected at the option of the Owner as not responsive. Erasures, interlineations or other corrections shall be authenticated by affixing in the margin immediately opposite the correction, the handwritten initials of each person executing the proposal.

102.07 MORE THAN ONE PROPOSAL

If, in addition to its Proposal, a Bidder has the controlling interest in a Bidder offering another Proposal, all Proposals by such Bidders may be rejected; provided, however, that a subcontractor who has quoted prices to a Bidder for construction which constitutes less than 1/2 of the amount of such Bidder's Proposal is not thereby disqualified from quoting prices to other Bidders for portions of the Work or from submitting a Proposal to the Owner for the Work to be furnished under the Contract.

102.08 EXECUTION OF PROPOSAL

If a proposal is made by a partnership, it shall contain the name and address of each partner and shall be executed in the partnership name, followed by the handwritten signature of a partner authorized to execute the Proposal for the partnership. If a Proposal is made by a corporation, it shall be executed in the name of the corporation, followed by the handwritten signature of an officer authorized to execute the Proposal for the corporation, and the printed or typewritten designation of the office he holds in the corporation. Another partner of the partnership or official of the corporation shall attest to the authority of the person executing the Proposal. The Owner may require any Bidder to furnish certified copies of extracts of the minutes of meetings of the governing body of the Bidder authorizing execution of the Proposal and Contract Documents.

102.09 SUBMISSION OF PROPOSAL

It is the sole responsibility of each Bidder to deliver its Proposal to the Owner at the place for receiving Proposals and prior to the time for opening Proposals last announced to Bidders. Any Proposal received after the time last announced for opening Proposals will be returned to the Bidder unopened.

102.10 MODIFICATION OF PROPOSAL

A modification of a Proposal already received will be considered only if the modification is received prior to the time last announced for opening Proposals. All modifications shall be made in writing, executed and submitted in the same form and manner as the original Proposal. Telephonic, faxed, or electronic modifications will not be considered.

102.11 WITHDRAWAL OF PROPOSAL

Each Proposal shall constitute an offer to the Owner as outlined therein and shall be irrevocable after the time last announced for opening Proposals. After the time last announced for opening Proposals and until execution of the Contract, no Bidder will be permitted to withdraw its Proposal, unless such execution is delayed due to acts of the Owner, for a period not exceeding 45 days after the time last announced for opening Proposals.

102.12 POSTPONEMENT OF OPENING

The Owner reserves the right to postpone the date and time last announced for opening Proposals and such postponements may be made at any time prior to the time last announced for opening Proposals. The Owner will give written, faxed, or electronic notice of any such postponement to each party to whom Contract Documents have been issued, followed by issuance of an Addendum confirming the changing of the announced date and time for opening Proposals.

102.13 OPENING PROPOSALS

At the time and place last announced for opening Proposals, each Proposal which has been received prior to the time last announced for opening Proposals, except those which have been properly withdrawn, will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Proposals. Each Bidder may have no more than two representatives at the opening.

102.14 PRICES

- a. The bid prices shall include everything necessary for furnishing the Work and fulfilling the Contract, except as may be otherwise expressly provided in the Contract Documents.
- b. Prices in words shall be valid only in a Bid Schedule requiring a single lump sum bid for all construction in the Schedule. If there is a difference between the price bid in words and the price bid in figures for the same lump sum bid, the words shall be the amount bid.
- c. If the sum of the correct extended amounts bid does not equal the total amount shown in the Proposal for the Bid Schedule, the correct sum of the correct extended amounts bid shall be the total amount bid for all construction in the Bid Schedule.
- d. If a Bidder submits more than one copy of its Proposal and all copies of the Proposal are not identical in all respects, the errors, if any, in extended amounts shall be first corrected as described above. If the several copies of the Proposal submitted are not identical after being so corrected, the copy having the lowest total amount bid for all Work in the schedule shall be the Bidder's Proposal and all other copies shall be invalid.
- e. All prices bid shall be firm unless the Special Conditions permit price escalation. If all or part of a Proposal includes construction for which the Special Conditions permit price escalation and no escalation method or indices are specified, the Bidder shall indicate in its bid the specific items subject to escalation, and shall give the method and indices to be used in computing the amount thereof.

102.15 EVALUATION OF PROPOSALS

In evaluating the Proposals, the Owner may consider the recommendation of the Owner's Engineer, Sargent & Lundy, the proposal prices, escalation, time of completion, Bidder's experience, past record of the Bidder in meeting commitments, qualifications of Bidder's personnel, Bidder's equipment available for prosecution of the Contract, character and proximity to the Project of Bidder's service facilities, effect upon the total cost to the Owner of ownership and operation of the Project and any other factors that may determine which Proposal best serves the interests of the Owner. If the Proposal includes furnishing manufactured equipment, the Owner will consider in addition to the foregoing the design and construction of such equipment, its performance, the cost of operation and maintenance, the availability of Shop Drawings, and, where applicable, the character and location of the Supplier's service facilities. The Owner reserves the right to waive irregularities or informalities in any or all Proposals without cause.

102.16 REJECTION OF PROPOSALS

The Owner reserves the right to reject any or all Proposals without cause. Without limiting the generality of the foregoing, the Owner may reject any Proposal which is incomplete, non responsive, obscure or irregular, any Proposal which omits a bid on any one or more items for which bids are required, and any Proposal from a Bidder which has previously failed to perform satisfactorily or to complete on time construction of any nature.

102.17 ACTION ON PROPOSAL

- a. Within 45 days after the time last announced for opening Proposals, the Owner may act either to issue a Notice to Apparent Low Bidder or to reject all Proposals. Failure of the Owner to issue a Notice to Apparent Low Bidder within the said time, or such additional time as the apparent lowest responsive Bidder shall agree to extend its Proposal shall constitute rejection of all Proposals.
- b. The Notice to Apparent Low Bidder will be signed by a duly authorized Official of the Owner and delivered to the Bidder in the manner provided for written notices. No other action or notice shall constitute a Notice to Apparent Low Bidder. Delivery of a Notice to Apparent Low Bidder shall obligate the Bidder who receives such notice to furnish Performance, Maintenance, and Statutory Bonds, Insurance Certificate or Insurance Policies, and to execute the Contract.

102.18 BONDS AND INSURANCE

- a. Within 10 days after delivery of Notice of Apparent Low Bidder, or such additional time as is allowed by the Owner, the Bidder shall furnish satisfactory Performance, Maintenance, and Statutory Bonds, Insurance Certificate or Insurance Policies, and shall execute the Contract. Failure,

neglect or refusal by the Bidder to do so shall constitute a breach of agreement to furnish the required documents and to enter into the Contract.

- b. Any Bidder receiving a Notice to Apparent Low Bidder who fails, neglects or refuses to furnish Performance, Maintenance, and Statutory Bonds, Insurance Certificate or Insurance Policies, and execute the Contract as herein provided shall not be the lowest responsive Bidder. The Owner may then select the lowest responsive Bidder and deliver a Notice to Apparent Low Bidder to such lowest responsive Bidder.

102.19 CONSTRUCTION SCHEDULE

- a. Each Bidder shall base its Proposal upon the Construction Schedule, if any, included in the Contract Documents. With its Proposal, the Bidder may include an alternative Construction Schedule for consideration by the Owner in lieu of the Construction Schedule included in the Contract Documents; provided, however, such alternative Construction Schedule shall provide for the completion of each part of the Work within the Construction Time or Construction Times set forth in the Contract Documents.
- b. If no Construction Schedule is included in the Contract Documents, the Bidder entering into a Contract with the Owner shall furnish a Construction Schedule satisfactory to the Owner prior to submittal of the first Contractor's Request for Payment or 30 days after Notice to Proceed, whichever is earlier.

102.20 SPECIAL INSTRUCTIONS

All bidders shall comply with such Special Instructions to Bidders as are provided in the Special Conditions.

102.21 SUBCONTRACTS

Each Bidder shall list on the Proposal form the name of each construction Subcontractor who will furnish in excess of ten percent of the Work. Failure to do so shall entitle the Owner, at its option, to reject the Proposal and award the Contract to the lowest responsive Bidder furnishing a satisfactory list of Subcontractors.

PART 1 – PROCEDURES AND LEGAL

SECTION 103 – BONDS

BID BOND

That _____ Bidder, as Principal and _____ (Bonding Company), as Surety, a corporation of _____ whose principal office is located at _____ are firmly bound unto the Oklahoma Municipal Power Authority (Owner), as Obligee, to fulfill the obligations of the Principal and the Surety under the Proposal to which reference is hereafter made, in the amount of _____ Dollars (\$ _____) for payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written Proposal, dated _____ offered to enter a contract with Obligee for the Oklahoma Municipal Power Authority Charles D. Lamb Energy Center Raw/Fire Water and Demineralized Water Field-Fabricated Tanks pursuant to the terms and conditions set forth in the Contract Documents, dated _____, including all Addenda thereto, the engineering provisions of which were prepared by the Engineer and Owner, which Proposal and Contract Documents are by this reference made a part thereof.

NOW, THEREFORE, the condition of this obligation is such that is the Principal within 10 days, or such additional time allowed by the Obligee, after delivery by the Obligee to Principal of Notice to Apparent Low Bidder shall furnish Performance Bond, Maintenance Bond, Statutory bonds, Insurance Certificate or Insurance Policies, and execute the Contract all as specified in said Contract Documents, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Any suit under this bond shall be instituted before the expiration of two (2) years from the date announced for opening Proposals.

Signed and sealed the _____ day of _____, 20____.

(Surety)

(Principal)

(Title)

(Title)

MAINTENANCE BOND

DEFECT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____,
As Principal, and _____,
a corporation organized under the laws of the State of _____, and
authorized to transact business in the State of Oklahoma, as Surety, are held and firmly
bound unto The Oklahoma Municipal Power Authority in the penal sum of
_____ Dollars (\$ _____), in lawful money of the United States of
America, said sum being equal to One Hundred Percent (100%) of the Total Contract
Amount, for the payment of which, well and truly to be made, we bind ourselves and
each of us, our heirs, executors, administrators, trustees, successors, and assigns,
jointly and severally, firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written contract with The Oklahoma Municipal
Power Authority, dated _____, 20____, for the Oklahoma Municipal
Power Authority Charles D. Lamb Energy Center Raw/Fire Water and Demineralized
Water Field-Fabricated Tanks all in compliance with the plans and specifications
therefore, made a part of said Contract and on file in the Office of The Oklahoma
Municipal Power Authority.

NOW, THEREFORE, if said Principal shall pay or cause to be paid to The Oklahoma
Municipal Power Authority, all damage, loss, and expense which may result by reason of
defective materials and/or workmanship in connection with said work, occurring within
the warranty period, then this obligation shall be null and void, otherwise to be and
remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or
alterations in said Contract and no deviations from the plan or mode of procedure herein
fixed shall have the effect of releasing the Sureties, or any of them, from the obligations
of this bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in fact, duly authorized so to do the day and year set forth below.

Dated this _____ day of _____, 20 ____.

PRINCIPAL

By _____

Title

ATTEST:

SURETY:

By: _____

Name: _____

Attorney-in-Fact

Address: _____

City: _____

Telephone: _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENT, that we, _____

_____,
as Principal and, _____ with
general offices in _____ a corporation organized under the laws of the
State of _____ and authorized to transact business in the State of
Oklahoma, Surety, are held and firmly bound unto The Oklahoma Municipal Power
Authority a body corporate and politic organized and existing under the laws of the State
of Oklahoma, in the penal sum of _____
_____ Dollars (\$ _____), lawful money of the United States,
in payment of which sum well and truly to be made, the said Principal and Surety bind
presents.

Signed, sealed and delivered this _____ day of _____,
20 _____.

WHEREAS, said Principal has entered into a written contract with the Oklahoma
Municipal Power Authority of the State of Oklahoma dated this ____ day of
_____, 20____, Oklahoma Municipal Power Authority Charles D. Lamb Energy
Center Raw/Fire Water and Demineralized Water Field-Fabricated Tanks according to the
plans and specifications attached to said contract, which includes the furnishing of all
necessary tools, equipment, material and labor, a copy of which contract, together with
all plans, specifications, and general conditions, is hereto attached and made a part
hereof as if set out in full herein, and for the payment to the Oklahoma Municipal Power
Authority, of all sums due, or which may become due, by the terms of the contract, as
well as by reason of any violation thereof by the Principal herein, and for the payment of
any and all judgments, costs of suits and actions brought against the Oklahoma
Municipal Power Authority, or its officers, for any cause whatever arising from, or on
account of, any injuries or damage to life or property, suffered or sustained by any
person, or persons, firm or corporation, caused by the Principal herein, its agents,
servants, or employees, in the construction of said work, or by, or in consequence of,
any negligence, carelessness, or misconduct, in guarding or protecting the same, or
from any improper or defective materials used in the construction of said work, or any
act of omission of said Principal, or its agents, servants, or employees; and for the
protection of the Oklahoma Municipal Power Authority against all suits, or claims for
infringements, or patent rights or processes.

And the said Surety, for value received, hereby stipulates and agrees that no
change, extension of time, alteration or addition to the terms of the contract or to work to
be performed thereunder or the specifications accompanying the same shall in any way
affect its obligations on this bond, and it does hereby waive notice of any such change,
extension of time, alteration or addition to the terms of the contract or to the work or to
the specifications.

NOW THEREFORE, the condition of the foregoing obligation is such that is the said Principal shall well and truly perform all the covenants and conditions of the said contract on the part of the said Principal to be performed, then this obligation shall be void, otherwise to remain in full force and effect in law.

IN TESTIMONY WHEREOF, the said Principal has caused these presents to be executed in its name, and its corporate seal to be hereto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed, by its attorney-in-fact, duly authorized thereunto so to do, the day and year first above written, and these presents have been executed in duplicate counterparts.

Contractor (Principal)

Oklahoma Resident Agent

Address

By

Surety Company

By
Attorney-in-Fact

(Accompany this bond with Attorney-in-Fact's Authority from the Company)

(Principal's Seal)

(Surety's Seal)

It is understood that if we desire to attach our own printed purchase agreement form to the Bidding Documents that no intent or purport of such printed form shall be in conflict or be at variance with any part of these Bidding Documents except as specifically outlined in a letter accompanying this Proposal listing all exceptions to these Bidding Documents.

If written notice of the acceptance of this Proposal is mailed, electronically mailed or delivered to the undersigned within forty-five (45) days after the date of opening bids, or any time thereafter before this bid is withdrawn, the undersigned will, within ten (10) days after the date of such mailing, electronic mailing or delivering such notice, execute and deliver a Contract in the form of contract attached.

The undersigned hereby designates as his office to which such notice of acceptance may be mailed, electronically mailed or delivered.

SIGNATURE OF BIDDER

By _____

Title _____

Address _____

Dated _____

ATTEST:

Title _____

(Attach Corporate Seal)

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENT:

that _____, as
Principal, _____ and
_____(Bonding
Company), as Surety, a corporation of _____, whose
principal office is located at _____,
are firmly bound unto the Oklahoma Municipal Power Authority (Owner), as Obligee to fill
the obligations of the Principal and the surety under the Contract to which reference is
hereafter made, in the amount of _____ Dollars
(\$_____) for payment whereof Principal and Surety bind themselves,
their heirs, executors, administrators, successors and assigns, jointly and severally, firmly
by these presents:

WHEREAS, Principal has by written Proposal, dated _____, offered
to enter into a Contract with Obligee for the Oklahoma Municipal Power Authority Charles
D. Lamb Energy Center Raw/Fire Water and Demineralized Water Field-Fabricated
Tanks pursuant to the terms and conditions set forth in the Contract Documents, dated
_____, the Owner has issued a written Notice to Apparent Low
Bidder dated _____, and

WHEREAS, this bond is given in compliance with Title 61, Oklahoma Statutes, Sections 1,
and 2, as amended and supplemented,

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall pay
all indebtedness incurred for labor or material or rental of machinery or equipment
furnished in the construction of said public building or in making said public improvement,
and shall faithfully perform all provisions of the Contract on its part, and maintain the
Obligee and the Obligee's property free and clear of all liens arising out of agreements for
labor and material and pay all laborers, mechanics, and subcontractors and materialmen,
and all persons who shall supply such person or persons or subcontractors or material
men with provisions and supplies for the carrying on of such work and indemnify and save
harmless the Obligee from all loss, cost or damage which it may suffer by reason of the
failure to do any of the foregoing, then this obligation shall be null and void; otherwise, it
shall remain in full force and effect.

All persons who have furnished labor, materials or supplies for use in and about the work
provided for in the Contract shall have a direct right of action under this bond, subject to
the Obligee's priority.

Any suit under this bond shall be instituted before the expiration of seven (7) years from
the date on which final payment under the Contract is due.

Signed and sealed this _____ day of _____, 20 _____.

Surety (Principal)

By _____

(Title)

Attorney-in-Fact

PROPOSAL

Oklahoma Municipal Power Authority

**Charles D. Lamb Energy Center (CDLEC)
Raw/Fire Water and Demineralized Water Field-Fabricated Tanks
Ponca City, Oklahoma**

Oklahoma Municipal Power Authority
Edmond, Oklahoma

Ladies and Gentleman:

Having carefully examined the Plans and Specifications for the Charles D. Lamb Energy Center (CDLEC) Raw/Fire Water and Demineralized Water Field-Fabricated Tanks for the Oklahoma Municipal Power Authority, being fully familiar with the site of the proposed work and having familiarized ourselves with all the factors affecting the cost of construction, we propose to furnish all the necessary labor, materials, tools and equipment, together with all other items of cost including insurance and supervision required for the work called for on the Plans and in the Specifications for the following:

- A. CDLEC Raw/Fire Water and Demineralized Water Field-Fabricated Tanks as specified herein.

Base Bid (See Attachment 1: Proposal Pricing Pages, PP-1-5).

TOTAL BID PRICE: _____
_____ Dollars (\$ _____)

- B. Completion Date: _____

(Required Completion Prior to August 31, 2014)

ADDENDUM RECEIPT

We acknowledge receipt of the following Addenda:

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

PART 1 - PROCEDURES AND LEGAL

SECTION 104 - AGREEMENT

THIS CONTRACT is made and entered into by and between the Owner and the Contractor whose names are subscribed hereto, and is effective as of the date the Contract is signed by the Owner.

WITNESSETH:

WHEREAS, The Owner has caused the preparation of certain contract documents entitled Charles D. Lamb Energy Center (CDLEC) Request for Proposal Technical Specification for Raw/Fire Water and Demineralized Water Field-Fabricated Tanks and

WHEREAS, The Owner has invited Proposals, received and analyzed said Proposals and duly given Notice to Apparent Low Bidder as set forth in detail in the Contract Documents, which are defined in Part 2 - General Conditions, all of which Contract Documents are made a part hereof and which constitute the whole Contract between the Owner and the Contractor, and

WHEREAS, The Contractor has offered in its Proposal to engineer, procure and construct as required by the Contract Documents in its Proposal.

NOW, THEREFORE, It is hereby agreed that

(a) The Contractor shall furnish the Work, pay all costs and perform all requirements of this Contract for the CDLEC Raw/Fire Water and Demineralized Water Field-Fabricated Tanks in the manner specified in the Contract Documents, and

(b) The Owner shall pay to the Contractor the Total Contract Amount of _____ Dollars (\$ _____), in accordance with Part 2, General Conditions, Section 207.

(c) It is further agreed that the Contractor shall start work within 30 days after delivery of the Owner's Notice to Proceed and shall complete the work in accordance with the Construction Schedule or within the Construction Time or Construction Times set forth in the Special Conditions or the Proposal, whichever is earlier.

IN WITNESS WHEREOF, two (2) identical counterparts of this contract, each of which shall for all purposes be deemed an original hereof, have been duly executed by the parties hereto.

CONTRACT DOCUMENTS
REVIEWED AS TO FORM:

Attorney for Owner

Oklahoma Municipal Power Authority
2701 West I-35 Frontage Road
Edmond, Oklahoma 73013

The undersigned hereby certifies and represents to the Contractor that the person signing this Contract on behalf of the Owner is authorized to do so.

By _____
CINDY HOLMAN
GENERAL MANAGER

By _____
Title _____
Official of Owner

Date _____

The undersigned hereby certifies and represents to the Owner that

the person signing this Contract on behalf of the Contractor is authorized to do so.

Contractor

By _____

By _____

Title _____

Title _____

Date _____

PART 2 - GENERAL CONDITIONS

SECTION 201 – DEFINITIONS

201.01 ACT OF GOD

"Act of God" shall mean an earthquake, flood, cyclone or other cataclysmic phenomenon of nature. A rain, windstorm, high water or other natural phenomenon of unusual intensity for a specific locality, but which might reasonably have been anticipated from historical records of the general locality, shall not be construed as an Act of God.

201.02 ADDENDA

"Addenda" shall mean written modifications of the Contract Documents which may be issued by the Owner to holders of Contract Documents prior to opening Proposals.

201.03 BIDDER

"Bidder" shall mean any person, partnership or corporation that submits a Proposal and Proposal Guaranty, if required, to the Owner.

201.04 BID SCHEDULE

"Bid Schedule" shall mean an itemized list of bid items and proposed Contract Amount for the part of the Work specified in the Contract Documents which the Owner may let either alone or together with other Bid Schedules as a single Contract.

201.05 CHANGE ORDER

"Change Order" shall mean a written supplemental agreement executed by the Owner and the Contractor to modify the Contract at the time of or after its execution.

201.06 COMPLETION

"Completion" shall mean completion of the Work by the Contractor and written Notice of Acceptance of Construction to the Contractor by the Owner's official.

201.07 CONSTRUCTION SCHEDULE

"Construction Schedule" shall mean the time and activities plan for completion of the Work prepared in the format required by the Contract Documents.

201.08 CONSTRUCTION TIME

"Construction Time" or Construction Times" shall mean the number of days following delivery of Notice to Proceed as set forth in the Contract Documents for completion of the Work and any specified portions thereof.

201.09 CONTRACT

"Contract" shall mean the whole understanding between the Owner and the Contractor covering the furnishing of the Work and payment thereof which is encompassed within the Bid Schedule or Schedules specified in the Agreement and described in the Contract Documents.

201.10 CONTRACTOR

"Contractor" shall mean the person, partnership or corporation to whom a Notice to Apparent Low Bidder has been issued by the Owner and who has furnished suitable Performance and Labor and Material Payment Bonds, Insurance Certificate or Insurance Policies, Lump Sum Bid Breakdown and has executed the Contract.

201.11 CONTRACT DOCUMENTS

"Contract Documents" shall mean the following documents which form the Contract:

- a. Notice to Bidders
- b. Instructions to Bidders
- c. Proposal
- d. Construction Schedule (If used)
- e. Performance and Labor and Material Payment Bonds
- f. Agreement
- g. General Conditions
- h. Special Conditions
- i. Engineering Specifications
- j. Contract Drawings
- k. Addenda
- l. Change Orders

201.12 CONTRACT DRAWING

"Contract Drawing" shall mean a diagrammatic or pictorial description of the Work to be furnished, or copies thereof, which is included as a part of the Contract Documents as modified by Addenda and Change Orders to the Contract. Contract Drawings shall include proposal drawings issued to Bidders to delineate the scope of the Work and construction drawings issued to the Contractor during construction to further describe the details of the Project design.

201.13 ENGINEERING SPECIFICATIONS

"Engineering Specifications" shall mean written descriptions, including performance, of the Work to be furnished which is a part of the Contract Documents.

201.14 FIELD ENGINEERING REPRESENTATIVE

"Field Engineering Representative" shall mean an agent or employee of the Owner located at the Project site or at the point of manufacture of equipment.

201.15 OFFICIAL

"Official" shall mean a partner, officer or employee of an organization, properly authorized by the governing body to execute commitments for the organization, while acting within the limits of authority granted to him.

201.16 OWNER

"Owner" shall mean the person, partnership, corporation or governmental organization for which the Work is to be furnished.

201.17 OWNER'S ENGINEER

"Owner's Engineer" shall mean Sargent & Lundy, L.L.C.

201.18 OWNER'S INSTRUCTION

"Owner's Instruction" shall mean a written interpretation of the Contract issued for the guidance of the Contractor by the Field Engineering Representative on behalf of the Owner when specifically designated in the Special Conditions.

201.19 PERFORMANCE AND LABOR AND MATERIAL PAYMENT BONDS

"Performance Bond" and "Labor and Material Payment Bond" shall mean the forms of Performance Bond and Labor and Materials Payment Bond included in the Contract Documents which shall be furnished by the Contractor and its Surety as assurance to the Owner that the Contractor will furnish, pay for and warrant the construction and perform all the requirements of the Contract.

201.20 PROJECT

"Project" shall mean the improvement or facility to be completed in whole or in part through the performance of the Contract.

"Project Construction Manager" shall mean the partner, officer, agent or employee of the general construction contractor designated to represent such Contractor from time to time to manage and to coordinate the labor, material and equipment installation for the Project.

201.21 PROJECT MANAGER

"Project Manager" shall mean the official, agent or employee of the Owner designated by the Owner from time to time to act for the Owner in all matters pertaining to the Project.

201.22 PROPOSAL

"Proposal" shall mean a Bidder's offer to the Owner to contract for and undertake furnishing the Work for one or more Bid Schedules.

201.23 RETAINED AMOUNT

"Retained Amount" shall mean monies earned by the Contractor and temporarily withheld by the Owner in accordance with provisions of the Contract Documents. The Retained Amount for this Contract will be as indicated in Section 207.01.

201.24 REVIEW

"Review" shall mean the general observation of construction from time to time by Owner as to the performance of the Contractor in meeting the requirements of the Contract.

201.25 SHOP DRAWING

"Shop Drawing" shall mean a diagrammatic, pictorial or written description of the details of proposed materials, equipment components, construction, installation instructions, and operation and maintenance data, except drawings containing proprietary information, prepared by or for the Contractor and submitted for the review of the Owner to demonstrate that the construction when completed will meet the requirements of the Contract.

201.26 SUBCONTRACTOR

"Subcontractor" shall mean an independent person, partnership or corporation, other than an employee of the Contractor, supplying under agreement with the Contractor or any Subcontractor of the Contractor any construction or equipment in connection with the Contract.

201.27 SUBSTANTIAL COMPLETION

"Substantial Completion" shall mean that degree of completion of the construction necessary for the Project to function in commercial operation at its intended location for its intended use.

201.28 SUPERINTENDENCE

"Superintendence" shall mean the detailed direction by the Contractor necessary to furnish the Work required under the Contract, whether at the Project site or at other locations.

201.29 SUPPLY CONTRACTOR

"Supply Contractor" shall mean an independent person, partnership or corporation which furnishes any materials or equipment directly to the Owner under another contract or in connection with the Project.

201.30 SURETY

"Surety" shall mean a corporation executing a Performance Bond or Labor and Material Payment Bond payable to the Owner.

201.31 UNITS OF CONSTRUCTION

- a. "Basic Unit of Construction" shall mean an elementary part of the total construction which includes like materials and labor, is repetitive in nature, and is readily and economically measurable, i.e., "cu. yd. of concrete in place", "lin. ft. of pipe installed", or "lb. of reinforcing steel furnished".
- b. "Integrated Unit of Construction" shall mean a part of the total construction which combines various quantities of unlike materials, equipment and labor into a separate piece of construction where the component materials, equipment and labor are not in themselves readily and economically measurable, i.e., "Pumping station complete", includes pumps, excavation, concrete, electrical work, backfill, etc.

201.32 WORK

- a. "Work" shall mean all management, Superintendence, Contractor's design and detailing, checking, labor, materials, use of equipment and tools, transportation and other facilities or services necessary to complete any and all portions of the Contract.
- b. If the Contract includes furnishing manufactured equipment, "Work" shall also include all management, Superintendence, labor, materials, equipment components, tools, inspection, testing, transportation and other facilities and services necessary to design, manufacture, fabricate, assemble, deliver and install equipment and complete the Contract.

201.33 WRITTEN NOTICE

"Written Notice" shall mean a handwritten or typewritten communication delivered in person, or sent prepaid by Express Mail, Registered or Certified United States Mail, to

the individual, or to a partner of the partnership, or to an Officer of the corporation which is the Owner or the Contractor, or to the proper executive official if the Owner is a governmental body, to the business address of the party to be served as shown in the Contract Documents.

PART 2 - GENERAL CONDITIONS

SECTION 202 - OWNER-CONTRACTOR

202.01 OBSERVATION AND REVIEW

- a. The Owner and/or its representatives may observe and review any portion of the Work at any reasonable time during construction. The Owner may witness the testing of any portion of the Work wherever it may be located. However, the Owner will not be required to provide exhaustive or continuous on-site observation of all details of construction.
- b. One or more Field Engineering Representatives may be assigned to the Project site or may visit the Contractor's facilities to keep the Owner informed as to the progress, quantity and quality of construction, to keep the Owner's field records, to act as liaison between the Contractor and the Owner and to call the attention of the Contractor and the Owner to faulty or inadequate construction or any deviations of construction from the Contract Documents. Failure of such Field Engineering Representatives to call the attention of the Contractor and the Owner to faulty or inadequate construction or any deviations of construction from the Contract Documents shall not constitute acceptance of construction by the Owner. The presence or absence of Field Engineering Representatives at the Project site or the Contractor's facilities will be at the sole discretion of the Owner and such presence or absence of the Field Engineering Representatives shall not relieve the Contractor of its responsibility to furnish the Work.
- c. The Field Engineering Representatives will be authorized to reject construction not deemed to be in accordance with the Contract Documents by issuing to the Contractor a written Notice of Rejected Construction. The Contractor shall appropriately modify or remove rejected construction from the site. No recommendation for payment of previously rejected construction will be made until it has been modified to conform with the requirements of the Contract Documents in the opinion of the Owner. The failure of a Field Engineering Representative to reject construction shall not constitute approval or acceptance thereof by the Owner.
- d. If it should be considered necessary or advisable by the Owner at any time before final acceptance of the Work to make an examination of construction which is partially or fully completed, by disassembling, removing, tearing out, and satisfactorily reassembling or reconstructing any portion thereof, the Contractor, upon written notice from the Owner, shall promptly furnish all necessary facilities, labor and materials for such examination. If such construction is found to be defective due to the fault of the Contractor or its Subcontractors, the Contractor shall pay all the costs of such examination.

If, however, such construction is found to meet the requirements of the Contract, the Owner shall pay the Contractor as a change in construction for all labor, materials and use of equipment necessary for such examination and if such examination and reconstruction actually delays the completion of all work on the Project, the Construction Time or Construction Times shall be increased by the number of days required for such examination.

202.02 SPECIAL OBSERVATION, REVIEW AND WITNESS OF TESTING

- a. If the Contract Documents or Owner's Instructions require any part of the Work to be done specially observed, reviewed or testing witnessed, the Contractor shall give the Owner five days prior notice of its readiness for such observation, review or testing witnessed. If any construction which is required to be so specially observed, reviewed or testing witnessed should be assembled or covered up without such observation, review or testing witnessed as a result of the Contractor's failure to give proper notice, the construction shall be disassembled or uncovered for such observation, review or testing witnessed and again assembled or covered at the Contractor's expense.
- b. Where construction is required to be tested under the Contract, all necessary test equipment and facilities shall be furnished, set up and operated by the Contractor. The Owner will only witness such testing and shall be furnished certified copies of the test conditions and results.
- c. Upon the request of the Owner, the Contractor shall furnish certificates from an independent testing laboratory or other agency acceptable to the Owner which certify that the materials or equipment supplied have been examined and tested and are in full compliance and conformance with the Contract Documents. Where such examination, testing and certification are to be conducted by an independent laboratory or agency, the sample or samples of materials to be examined and tested shall be selected by such laboratory or agency or by the Owner and shipped to the laboratory by the Contractor at the Contractor's expense. All samples of materials for tests shall be taken according to methods provided in the Contract Documents. The Contractor shall furnish, at its expense, such samples of material in reasonable quantities as may be required for examination of test.
- d. At the option of the Contractor, if the costs of observation, review or testing of materials required by the Owner at the site will be greater than observation, review or testing at the point of manufacture, the Owner will observe, review or witness tests of certain materials or equipment at the manufacturer's or supplier's plant prior to delivery to the Project site. The Contractor shall pay to the Owner the reasonable cost to the Owner of such observation, review or testing including, but not limited to, the time, travel and subsistence expenses and any other expenses incurred in connection with such observation, review or testing. The costs of such optional observation, review or testing away from the Project site shall be paid each

month by the Contractor to the Owner. In the event the Contractor fails to pay said costs by the 20th day of the month following the invoicing for such services, such payment shall be deducted from any monies due the Contractor under the Contract.

202.03 SUBCONTRACTS

- a. The Contractor shall perform with its own organization not less than one-third of the total monetary amount of the Contract and shall not sublet to one Subcontractor more than one-half of the total monetary amount of the Contract without the previous written consent of the Owner. After execution of the Contract and prior to the beginning of operations on a subcontract, the Contractor may, if approved by the Owner through execution of a Change Order, employ a different Subcontractor than was offered in the Contractor's Proposal. In this event the Total Contract Amount shall be reduced by an amount equal to the reduction, if any, in the cost to the Contractor as a result of the change of Subcontractor. The Contractor shall furnish to the Owner the detailed bids of both Subcontractors before execution of the Change Order.
- b. The Contractor shall include all applicable provisions of these Contract Documents in all subcontracts for construction to be performed under the Contract.
- c. The Contractor shall be fully responsible to the Owner for the control, supervision and coordination, and the acts, errors and omissions of Subcontractors and of persons either directly or indirectly employed by them.
- d. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the Owner. The Owner's consent to or approval of any Subcontractor under the Contract shall not relieve the Contractor of its obligations under the Contract and no such consent or approval shall be deemed to waive or modify any provisions of the Contract.

202.04 SUSPENSION OF CONSTRUCTION

- a. Whenever, in the Owner's opinion, the weather is unsuitable, other conditions are unfavorable to execution of the Work or the Contractor has failed to carry out any of the provisions of the Contract, the Owner may immediately direct temporary suspension of construction, either wholly or in part, for a period up to 48 hours by causing an order to that effect to be delivered to the Contractor or its Project Construction Manager. Upon receipt of such order, the Contractor shall immediately suspend operations on that portion of the Work ordered suspended. Any temporary suspension of construction by the Owner shall not relieve the Contractor of its obligations under the Contract. The Contractor shall not be entitled to be paid for any

construction performed, standby time or damages arising from violation of an order for temporary suspension.

- b. The Owner may at any time order an extended suspension of the Work or any part thereof for a period not exceeding 180 days by giving 10 days prior written notice to the Contractor. Upon receipt of such notice, the Contractor shall suspend operations on that portion of the Work ordered suspended. Construction shall be resumed by the Contractor within 30 days after the date fixed in a written notice from the Owner to the Contractor to resume construction. The Owner shall reimburse the Contractor, as a change in construction, for reasonable actual additional expenses incurred by the Contractor in connection with the construction under the Contract as the result of such extended suspension; provided the extended suspension was not caused by an act, error or omission of the Contractor.
- c. The Contractor shall not suspend construction operations without obtaining the prior written permission of the Owner. Such permission from the Owner shall not be a basis for an extension of Construction Time.

202.05 OWNER'S TERMINATION

If the Owner determines at any time that it is in its best interest to terminate construction or the Contract, the Owner may do so by giving the Contractor 10 days prior written notice. Upon such termination the Owner shall pay the Contractor reasonable compensation for construction furnished to the date of such termination, including an allowance of 10 percent of the Total Contract Amount for overhead and profit as full and complete payment of all amounts due or to become due under the Contract.

All completed and partly completed construction furnished shall thereupon pass to and become the property of the Owner. In no event shall the total amount of compensation paid to the Contractor exceed the Total Contract Amount.

202.06 CONTRACTOR'S TERMINATION

If all of the construction under the Contract should be legally stopped by order of any court or public authority, other than the Owner, for a period of 90 days or more, through no act or fault of the Contractor, anyone employed by it, or any of its Subcontractors, then the Contractor, after 10 days written notice to the Owner, may terminate the Contract. Upon such termination, the Owner shall pay the Contractor reasonable compensation for construction furnished to the date of stoppage, including an allowance of 10 percent of the Total Contract Amount for overhead and profit, as full and complete payment of all amounts due or to become due under the Contract. All completed and partly completed construction furnished shall thereupon pass to and become the property of the Owner. In no event shall the total amount of compensation paid to the Contractor exceed the Total Contract Amount.

202.07 EMERGENCIES

- a. The Contractor shall be responsible for the safety of life and property at the Project site and in the event of emergencies shall take such action as is necessary to prevent or mitigate injury, damage or loss without special instruction or authorization from the Owner. In such event, the Contractor shall notify the Owner within 48 hours of any significant changes to the Work or deviations from the Contract Documents resulting from such emergency action.
- b. If the Contractor is advised that in the opinion of the Owner certain emergency construction must be done immediately to protect completed construction, the Contractor shall proceed at once with such emergency construction. If such emergency construction is within the scope of the Contract, the Contractor shall be paid as provided in the Contract. If such emergency construction is outside the scope of the Contract, the Contractor shall submit a written proposal within 10 days after completion of the emergency construction and the construction shall be paid for as a change in construction. Failure to submit such a proposal within the specified time shall constitute waiver of any claim based upon such emergency construction. The Owner shall have no obligation to compensate the Contractor for emergency construction required because of the Contractor's operations.

202.08 CONTRACTOR'S DEFAULT

- a. If the Contractor becomes insolvent, is adjudged bankrupt or makes an assignment for the benefit of its creditors, or if a receiver, assignee or other liquidating officer is appointed for the Contractor, or if the Contractor fails to prosecute the Work according to the Construction Schedule, or persistently or repeatedly refuses or fails to supply satisfactory Superintendence, satisfactory numbers of properly skilled workmen or satisfactory construction or fails to make payment to employees or Subcontractors or payment for materials or equipment when due, or violates any law, ordinance, rule or regulation of any governmental authority having jurisdiction, or otherwise is in violation of any provision of the Contract, the Contractor shall be in default under the Contract, and if such default continues for a period of 10 days after written notice thereof is served by the Owner upon the Contractor, the Owner, without prejudice to any other right or remedy, may declare the Contractor to be in default under the Contract by written notice thereof served upon the Contractor and its Surety.
- b. In the event of such declaration of default, the Surety shall have the obligation immediately to remedy the default or to undertake performance of the Contractor's obligations under the Contract; provided, however, that if the Surety does not remedy the default or does not undertake such performance within 15 days from the date of service of such declaration of default, the Owner may take possession of all construction and of all the

Contractor's equipment, tools and materials used in connection therewith and complete the construction by whatever method the Owner may deem expedient. In such event, the Contractor shall not be entitled to receive any further payment until construction is completed. If the unpaid balance of the Total Contract Amount exceeds the cost to the Owner of completing the Contract, including reasonable compensation for additional administrative, engineering and legal costs of the Owner, such excess shall be paid to the Contractor. If the cost to the Owner of completing the Contract including reasonable compensation for additional administrative, engineering and legal costs of the Owner, exceeds such unpaid balance, the Contractor shall immediately pay the excess to the Owner. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the Owner.

202.09 LIQUIDATED DAMAGES

- a. For each and every day that the Work and any specified portions thereof are not completed after the Construction Time or Construction Times fixed for completion in the Contract Documents, the Contractor shall pay the Owner, not as a penalty but as liquidated damages, such amount or amounts as are specified in Section 307.05 in the Special Conditions.
- b. Because of the difficulty in computing the actual damages which will result from failure to complete the Work and any specified portions thereof on time, the said amount or amounts of liquidated damages are hereby estimated, agreed upon and determined in advance by the parties hereto as a reasonable evaluation of the actual damages which the Owner will suffer for each and every day during which the completion of the work and any specified portions thereof are delayed beyond the Construction Time or Construction Times herein fixed.
- c. Such monies due the Contractor or to become due the Contractor at or after the Construction Time or Construction Times fixed in the Contract Documents for the Work and any portion thereof may be retained by the Owner, as may be necessary to pay said liquidated damages, and if such amounts are not sufficient to pay such liquidated damages, the Contractor shall immediately pay the deficiency to the Owner. Such deductions or amounts retained by the Owner shall not in any degree release the Contractor from further obligation and liability with respect to fulfilling the entire Contract.
- d. Nothing contained herein shall preclude claims by the Owner for damages caused by Contractor errors, omissions, or negligence unrelated to delay in completing the construction within the Construction Time or Construction Times fixed for completion in the Contract Documents.

202.10 CONTRACTOR'S CLAIMS PRIOR TO SUBSTANTIAL COMPLETION

- a. Written notice of any condition or event for which a claim is subsequently to be made by the Contractor shall be made to the Owner in writing within 2 days after the first observance of such conditions or event. A written claim for damages or additional compensation setting forth in full detail the labor, material and other costs and the total amount of the claim and the reasons therefore, shall be given to the Owner by the Contractor within 30 days after the first notice of such condition or event and if such condition or event continues, a similar written claim shall be presented every 30 days thereafter. Failure to give such notice of such condition or event and to present such detailed claims within the times specified shall constitute waiver of any claim based upon such condition or event. Knowledge of the condition or event on the part of the Owner shall not affect the requirements for written notice and written claims within the specified times.
- b. The Contractor shall not cause a delay of construction during any dispute. If the Owner orders a modification of the Contract by issuing a Change Order which becomes a subject of dispute or if any interpretation of the Contract Documents or Owner's Instructions becomes a subject of dispute, the Contractor, upon written notice from the Owner, shall proceed with construction as modified by the disputed Change Order during the period required to resolve the dispute.
- c. Claims for additional payment for delay in the Work caused by any act or omission of the Owner shall be limited to damages, if any, sustained during the time reasonably required for the Contractor to discharge its employees and to move equipment to another construction project location which, in the opinion of the contractor, is suitable for use of such equipment.

202.11 CONTRACTOR'S CLAIMS AFTER TERMINATION, SUBSTANTIAL COMPLETION OR DECLARATION OF CONTRACTOR'S DEFAULT

- a. When in the opinion of the Owner the Contract is substantially completed, the Owner will send to the Contractor, by Registered or Certified United States Mail, a written opinion of Substantial Completion. Within 30 days after delivery of such opinion of Substantial Completion or declared default of the Contractor or termination of the Contract before Substantial Completion, the Contractor shall give the Owner written notice of any claim it intends to make against the Owner arising out of or in relation to the Contract; provided that written notice of a claim based upon an event which occurs after delivery to the Contractor of the opinion of Substantial Completion may be so given within 30 days after the occurrence of the event upon which the claim is based but in no event later than 30 days after Owner has given Notice of Acceptance of Construction. The notice of claim shall state the amount claimed and shall specify in detail the nature and grounds of the claim. The fact that the Contractor has given any notice or presented any claim required by any other provision of the Contract shall not relieve it from giving the

notice required by this paragraph of the Contract nor shall giving the notice required by this paragraph relieve the Contractor from the effect of failure to give any notice or present any claim as required by any other paragraph of the Contract.

- b. Within 60 days after receipt of such notice of claim, the Owner will give the Contractor written notice that the claim is allowed, rejected or allowed in part and rejected in part. Any claim or part thereof so allowed shall constitute an acknowledged obligation of the Owner under the Contract payable in due course. Failure to give such written notice of allowance or rejection within 60 days after the Owner receives the notice of claim shall constitute rejection thereof in full. The Contractor shall not start suit on any claim until the Owner has rejected it in whole or in part or has been accorded 60 days in which to allow or reject it as above provided.
- c. Within 30 days after receipt of written notice that the claim has been rejected in whole or in part, or within 90 days after the notice of claim is received by the Owner in case no notice of rejection is given, the Contractor shall bring suit against the Owner in the proper court of the county or judicial district in which the Project is located or in which the Owner has its principal place of business. Otherwise, the claim, except the portion thereof allowed by the Owner, shall be forever barred. No suit shall be brought against the Owner on any claim arising out of or in connection with the Contract unless the requirements of this paragraph applicable to the Contractor have been strictly complied with.

202.12 ASSIGNMENT OF CONTRACT

The Contractor shall not assign the Contract or assign any monies due or to become due under the Contract without the previous written consent of the Owner. No assignment of the Contract by the Contractor with the consent of the Owner shall be valid unless it contains a provision that the funds to be paid to the assignee under the assignment are subject to all the Contractor's obligations under the Contract.

202.13 WAIVER OR MODIFICATION

The failure of either party to the Contract to insist upon strict performance of any of the terms and provisions of the Contract Documents shall not constitute a waiver or relinquishment of any such terms or provisions, but the same shall be and remain in full force and effect. The making of any payment by the Owner to the Contractor, with or without knowledge of any breach of Contract, shall not be deemed to be a waiver as to any breach of any term or provision of the Contract Documents. No waiver or modification of any term or provision of the Contractor shall be claimed by the Contractor unless the same be made by Change Order, and no such waiver or modification shall constitute a waiver or modification of any other term or provision.

202.14 CONTRACTOR'S MANAGEMENT AND SUPERINTENDENCE

- a. During the progress of construction, the Contractor shall keep in constant attendance at the Project site or sites a competent Project Construction Manager and necessary assistants all satisfactory to the Owner. The Project Construction Manager shall not be changed, except with the consent of the Owner, unless the Project Construction Manager ceases to be in the Contractor's employ. The Contractor shall not employ or continue to employ on the Project, a Project Construction Manager who is unsatisfactory to the Owner. The Project Construction Manager shall represent the Contractor and all directions given to the Project Construction Manager shall be as binding as if given to the Contractor. Important directions shall be subsequently confirmed in writing upon written request in each case. The Contractor shall give efficient management and Superintendence to the Work, using its best skill and attention.
- b. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction; however, the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is required by the Contract Documents.

202.15 DEFENSE COSTS

- a. The Owner and the Contractor agree that in the event either of them institutes legal action against the other under the Contract the prevailing party shall be entitled to recover its reasonable defense costs, including investigations, engineering fees, attorneys' fees, expert witnesses' fees, court costs and any other expenses of defense which it may incur subject to the limitation set forth below.
- b. The Owner and the Contractor agree that in the event either of them institutes legal action against the other under the Contract, the claimant in such legal action shall pay to the other party a portion of the defense costs, including investigations, engineering fees, attorneys' fees, expert witnesses' fees, court costs and any other expenses of defense which may be incurred by such other party. Such portion of the defense costs shall bear the same ratio to the total defense costs incurred by the other party as the dollar amount of the claimant's monetary demands which were not sustained by the court bears to the total dollar amount of the claimant's monetary demands. The party or parties whose claims were not sustained in whole or in part shall pay such portion of the defense costs to the other party or parties as part of the court's assessment of costs after being furnished by the other party or parties with an itemized listing of the total defense costs incurred by deducting same from its total award.

202.16 SEVERABILITY AND HEADINGS

- a. If any part of the Contract Documents, including, but not limited to, any provision, paragraph, clause, phrase or words, is found to be in conflict with applicable law, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder shall be given full force and effect.
- b. The descriptive headings of the various parts, sections, paragraphs and other portions of the Contract Documents have been inserted for convenience of reference only and shall in no way modify or restrict any of the terms and provisions of the Contract Documents.

PART 2 - GENERAL CONDITIONS

SECTION 203 - DRAWINGS AND SPECIFICATIONS

203.01 INTENT OF CONTRACT DOCUMENTS

- a. Except as otherwise provided in the Special Conditions, the intent of the Contract Documents is to include all plant, materials, equipment, tools, supplies, management, Superintendence, Contractor's design and detailing, labor, transportation, fuel, and all other utilities and services necessary for furnishing all of the construction required for the proper performance of the Contract with the exception of electrical power and water which shall be furnished by Owner.
- b. Except as otherwise provided in the Special Conditions, the intent of the Contract Documents is to require complete construction and to specify and set forth a complete operating unit or system ready for use regardless of whether or not every detail has been set forth in the Contract Documents. Any omission of details from the Contract Documents shall not be construed to mean that they are to be omitted by the Contractor or to affect in any way the completeness of construction. The cost of such details shall be included in the prices in the Proposal.
- c. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual or code in effect on the date of issuance of the Notice to Bidders unless otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the Owner or Contractor, or any of their agents or employees from those set forth in the Contract Documents.

203.02 CONFLICT AND PRECEDENCE

The Contract Documents are complementary and what is called for by any one of them shall be as binding as if called for by all of them. In the event there are any conflicting provisions or requirements in the component parts of the Contract, the several Contract Documents shall take precedence in the following order:

1. Change Orders
2. Agreement
3. Addenda
4. Special Conditions

5. General Conditions
6. Engineering Specifications
7. Contract Drawings
8. Construction Schedule
9. Notice to Bidders
10. Instruction to Bidders
11. Performance and Labor and Material Payment Bonds
12. Proposal

203.03 DISCREPANCIES IN CONTRACT DOCUMENTS

- a. If at any time the Contractor discovers that there is possible error, omission or discrepancy in any of the Contract Documents, the Contractor shall immediately notify the Owner in writing. The Owner will promptly review the alleged error, omission or discrepancy and issue an Owner's Instruction or the Owner may issue a Change Order. Any work done on that portion of the Project affected by such alleged error, omission or discrepancy after such discovery and until receipt of an Owner's Instruction or issuance of a Change Order shall be at the Contractor's expense.
- b. To avoid any disputes which might arise as to the meaning of any engineering requirements in the Contract Documents or to any alleged error, omission or discrepancy herein, the Owner's opinion as to the true intent and meaning, and the Owner's interpretation thereof, shall first be obtained. If the Owner's opinion is not satisfactory to the Contractor, a request may be made in writing to the Owner for a final determination. The determination of the Owner shall be obtained before any legal action is taken by the Contractor. All dimensions shall be taken from the figures on the Contract Drawings and no dimensions measured from such drawings shall be valid. If dimensions are omitted, operations shall not be started on that part of the construction until the necessary dimensions have been obtained from the Owner in an Owner's Instruction or on a Contract Drawing.

203.04 OWNERSHIP OF ENGINEERING DATA

All reports, analyses, designs, design criteria, computations, drawings, specifications, estimates, survey notes, site investigations and other office and field data prepared by or for the Owner, and all copies thereof, are and shall remain the property of the Owner. Such data shall not be duplicated or used for additions to the Project or for other projects and, with the exception of the executed sets of Contract Documents, shall be returned to the Owner upon completion of the Work. All models required to be furnished by the Contractor, if any, shall become the property of and shall be delivered to the Owner upon completion of the Work.

203.05 DRAWINGS, SPECIFICATIONS AND INSTRUCTIONS

- a. The Owner has prepared technical specifications and the Contract Documents. The Owner may issue additional information during the term of

the Contract by means of Owner's Instructions or construction drawings, to add detail to the Contract Documents. All such Owner's Instructions and construction drawings shall be consistent with the Contract Documents and shall be developments thereof.

- b. All construction shall be furnished in accordance with the Contract Documents and to the dimensions fixed thereby. The Owner reserves the right to make reasonable revisions in dimensions and relocations of construction; provided, however, that such revisions or relocations are made prior to construction of any item to be revised or relocated. If such revisions and relocations result in no additional cost to the Contractor, such revisions or relocations shall be made at no additional cost to the Owner.

203.06 CONTRACTOR'S COPIES OF CONTRACT DOCUMENTS

In addition to the one (1) set of executed Contract Documents given the Contractor upon signing the Contract, the Contractor will be supplied by the Owner, without charge, not more than two (2) sets of Contract Documents. Additional copies of Contract Documents and either full or reduced size Contract Drawings, if desired by the Contractor, will be furnished by the Owner at the cost to the Owner of reproduction, handling and mailing or shipping. The Contractor shall keep one set of Contract Documents, currently annotated to show all changes made during construction, at the Project site in good condition in a weather-tight enclosure and available to the Owner at all times.

PART 2 - GENERAL CONDITIONS

SECTION 204 - MATERIALS AND WORKMANSHIP

204.01 MATERIALS AND EQUIPMENT

- a. Unless otherwise provided in the Special Conditions, the Contractor shall furnish and fully pay for all construction prior to acceptance by the Owner. All materials and equipment incorporated in the Work shall be new and not previously used. If requested by the Owner, the Contractor shall provide satisfactory evidence of the kind and quality of materials and equipment to be furnished.
- b. If materials or equipment are specified in the Special Conditions to be furnished by the Owner, they shall be conclusively deemed acceptable for the purpose designed if received in satisfactory condition. The Contractor may continue to use such materials or equipment until otherwise directed; provided, however, that if the Contractor discovers any defect in materials or equipment furnished by the Owner, it shall immediately notify the Owner in writing and shall cease to use such defective items pending receipt of written instructions from the Owner.
- c. If materials or equipment are specified in the Special Conditions to be furnished by the Owner, they shall be received by the Contractor f.o.b. the point of delivery specified in the Special Conditions, and in the absence of such specification, receipt by the Contractor shall be f.o.b. the plant of the supplier of the materials or equipment to be so furnished. The Contractor shall receive, load and unload, transport, store and properly protect from damage or loss all such materials or equipment and the Contractor shall be responsible for loss or damage after receipt of materials or equipment and until final acceptance of construction by the Owner. The Contractor shall immediately report to the Owner in writing in the form and manner prescribed by the Owner the receipt of Owner-furnished materials or equipment.

204.02 WORKMANSHIP

All construction shall be such that its several component parts function as a workable system with all accessories necessary for its proper operation, and all construction shall be furnished with components tested, properly adjusted, and in satisfactory operation. Construction shall be furnished in conformance with the generally accepted standard practice of the trade so as to contribute to maximum efficiency of operation, accessibility, appearance, minimum cost of operation, maintenance and

construction of future alterations and additions. The completed construction shall conform and adjust to and operate in a coordinated manner with the existing installation, if any.

204.03 COMPLIANCE WITH CONTRACT DOCUMENTS

- a. Whenever in the Contract Documents any material, equipment, method or process is indicated or specified without reservation, by patent or proprietary name, by name of the manufacturer or by catalog number, such specification shall be deemed to be used for the purpose of establishing a standard of quality and for facilitating the description of the material, equipment, method or process desired and, whether or not so designated, shall be deemed to be followed by the words "or equal". The Contractor may offer to furnish another material, equipment, method or process which shall be substantially equal in every respect to that so indicated or specified. In such event the Owner shall be the sole judge of the equality of such material, equipment, method or process offered in substitution.
- b. Offers of substitution for items described in the Contract Documents will be considered only upon the written request of the Contractor, and no requests for such substitutions will be acknowledged or considered from suppliers, distributors, manufacturers, Subcontractors or other sources. Requests for approval of a substitution shall be by submitting Shop Drawings and shall be accompanied by documentary evidence of equality in the form of descriptive literature, samples, records of performance, certified copies of tests by independent recognized laboratories, and differences in price and delivery, if any, in the form of certified quotations from suppliers of both the specified material, equipment, method or process and the proposed substitute.
- c. Such offers of substitution of materials or equipment shall include data to substantiate that the "or equal" product meets the following criteria applicable to the item submitted:
 - (1) the change is adaptable to the design,
 - (2) the functional performance will be equal to or better than the item specified,
 - (3) where appearance affects the end product, the appearance of the item will be as good as or better than the item specified,
 - (4) the maintenance cost for the product or item will be equal to or less than the item specified,
 - (5) the quality of materials used and the level of construction of the item will be as good as or better than the item specified,

- (6) the net price of the item will be within the same price range as the item specified, and
 - (7) the cost to the Owner of furnishing and installing the item, including any necessary evaluation and redesign costs which shall be reimbursed to the Owner by the Contractor, will be equal to or less than that of the item specified.
- d. When substitute materials or equipment necessitates changes to or coordination with any other portion of the Work, the data submitted shall include Shop Drawings showing all such changes. As part of any acceptance of substitute materials or equipment, the Contractor shall furnish all materials, perform all installation and make all other modifications as may be required to incorporate such changes at no additional cost to the Owner.

204.04 STORAGE OF MATERIALS AND EQUIPMENT

If any materials or equipment are stored, they shall be stored so as to ensure the preservation of their quality and fitness. Materials and equipment shall be placed on platforms or other hard, clean surfaces, and not on the ground, and shall be placed under cover and heated adequately to prevent condensation or freezing. Stored materials and equipment shall be located so as to facilitate observation. The Contractor shall be responsible for all damage or loss that occurs as a result of its fault or negligence in connection with the care and protection of all materials and equipment until acceptance by the Owner.

204.05 MANUFACTURER'S INSTRUCTIONS

All instructions and directions of the manufacturer of material and equipment furnished to the Contractor shall be followed unless specified to the contrary. The Contractor shall obtain and furnish to the Owner prior to use of materials or installation of equipment five (5) copies of all instructions and directions of the manufacturer of such materials and equipment furnished by the Contractor. Instructions and directions for any Owner-furnished materials and equipment will be furnished to the Contractor.

204.06 WARRANTIES

- a. The Contractor warrants to the Owner that all construction equipment and materials to be provided under the Contract shall be fit for the purpose specified when operated or used in accordance with generally accepted operating practices; shall be new and free from defects in material, workmanship, and title; shall meet all specifications, including those relating to performance, contained or incorporated by reference in the Contract; and shall be installed under technical direction performed in a competent and diligent manner in accordance with generally accepted professional practices.

- b. The foregoing warranties, except as to title, shall apply to defects or deficiencies occurring within a period of 1 year from substantial completion of construction of the Project provided the same is not unreasonably delayed by the Owner or others. If, however, during the above 1 year warranty period the construction is not available for operation due to a failure to meet such warranties, such time of unavailability shall not be counted as part of the warranty period. The conditions of any field tests shall be mutually agreed upon, and the Contractor shall be notified of and may be represented at all tests that may be made.
- c. If construction furnished does not meet the foregoing warranties, assuming normal and proper use and maintenance, the Owner shall promptly notify the Contractor and make the construction available for correction. The Contractor shall thereupon within a reasonable time correct all defects, including non-conformance with the Engineering Specifications, by either repairing or replacing any defective or damaged parts of the Work furnished under the Contract. The cost of labor, materials and equipment directly associated with such repair or replacement of the construction, including removal, loading and unloading, transportation to and from the repair site and reinstallation; shall be borne by the Contractor. This obligation, however, is limited to the construction furnished and does not include any responsibility or obligation with respect to removal or replacement of structures, equipment or other parts of the Project not furnished by the Contractor.
- d. Any repaired or replacement construction furnished under the foregoing warranties shall carry warranties on the same terms as set forth above for one year from the date of its repair or replacements.
- e. The foregoing warranties are cumulative and in addition to all other warranties whether written, oral or implied. There is no implied warranty of merchantability or fitness for purpose.
- f. The Contractor shall obtain written warranties from its Subcontractors and suppliers of material and equipment where such warranties are specifically required by the Special Conditions and shall deliver the original warranties to the Owner. Such Subcontractor warranties shall be in addition to the general warranties required from the Contractor by this paragraph.
- g. Neither the final payment, nor any other provision of the Contract, nor partial or entire use of the Work by the Owner shall relieve the Contractor of liability with respect to the warranties referred to in the Contract or any other warranties express or implied.

204.07 DEFECTIVE MATERIALS AND WORKMANSHIP

- a. The Contractor shall promptly remove from the premises all materials and equipment and correct all construction which in the opinion of the Owner

fails to conform to the Contract Documents, whether incorporated in the Work or not, and the Contractor shall promptly replace and re-execute its own construction in accordance with the Contract Documents and without expense to the Owner, and shall bear the expense of making good all construction of other contractors destroyed or damaged by such removal and replacement.

- b. If the Contractor does not promptly remove from the premises all materials and equipment and correct all construction which in the opinion of the Owner fails to conform to the Contract Documents, within a reasonable time which shall be fixed by written notice from the Owner, the Owner may remove and store the materials at the expense of the Contractor. If the Contractor does not pay the expense of such removal and storage within 10 days after delivery of a notice of the cost of such removal and storage, the Owner may give written notice to the Contractor and 10 days after such notice the Owner may dispose of the material. Costs arising from such disposal of materials and correction of the construction shall be paid by the Contractor and may be deducted from any payment due the Contractor.

PART 2 - GENERAL CONDITIONS

SECTION 205 - BONDS-LIABILITY-INSURANCE

205.01 PERFORMANCE, MAINTENANCE AND STATUTORY BONDS

- a. Within 10 days after the Contractor receives the Notice to Apparent Low Bidder, and prior to the execution of the Contract, the Contractor shall furnish a Performance Bond, Maintenance Bond, and a Statutory Bond in the form acceptable to the Owner, which form is included in the Contract Documents, with corporate Surety satisfactory to the Owner. Such bonds shall insure the full and faithful performance of the Contract and the payment of all obligations arising thereunder, and shall each be in an amount equal to 100 percent of the Total Contract Amount unless otherwise provided in the Special Conditions.
- b. Such bonds shall further comply in all respects with the laws of the State in which the Project site is located.
- c. The Surety on such Performance Bond, Maintenance Bond, and Statutory Bond shall be a duly licensed surety corporation authorized to do business in the State where the Project site is located. The Surety shall be listed by the United States Treasury Department as holding a Certificate of Authority from the Secretary of the Treasury as being acceptable as a Surety for Federal projects. No Surety's liability shall exceed the underwriting limitations specified by the United States Treasury Department for the respective Surety.
- d. In the event the Surety for any bond furnished by the Contractor is declared bankrupt or becomes insolvent or ceases to meet the requirements set forth above in this paragraph, the Contractor shall furnish within five days a substitute bond from a Surety meeting all requirements of this paragraph.

205.02 PATENTS AND ROYALTIES

- a. The Contractor shall pay the costs of all royalties, permits, licenses or other fees necessary for the performance of the Contract.
- b. The Contractor warrants that the Work furnished hereunder, and any part thereof, shall be delivered free of any rightful claim of any third party for infringement of any patent. If notified promptly in writing and given authority and information, the Contractor shall defend or may settle, at its expense, any suit or proceeding against the Owner so far as it is based on a claimed patent infringement which would result in a breach of this warranty and the

Contractor shall pay all damages and costs awarded therein against the Owner due to such breach. In the event the Work or any part thereof is held to constitute such an infringement and the use of said Work or part is enjoined, the Contractor shall, at its expense and option, either procure for the Owner the right to continue using said construction or part, or replace same with non-infringing construction, or part, or modify same so it becomes non-infringing.

- c. The preceding subparagraph shall not apply to any construction or part manufactured to the Owner's design, or to the use of any construction furnished hereunder in conjunction with any other product in a combination not furnished by the Contractor pursuant to the Contract. As to any such construction, part, or use of such combination, the Contractor shall have no liability whatsoever for patent infringement and the Owner will hold the Contractor harmless against any infringement claims arising there from.
- d. This Patents and Royalties paragraph states the entire liability of the Contractor for patent infringement by said construction or any part thereof.

205.03 LAWS AND REGULATIONS

- a. The Contractor shall give all notices required by law and comply with all laws, ordinances, rules and regulations relating to the performance of the Work. The Contractor shall be liable for all violations of the law in connection with construction furnished by the Contractor.
- b. It shall not be the Contractor's responsibility to make certain that the Contract Documents conform to applicable laws, ordinances, rules and regulations; however, if the Contractor observes that the Contract Documents are at variance with any law, ordinance, rule or regulation, the Contractor shall promptly notify the Owner in writing and all necessary changes shall be made by Owner's Instruction or Change Order. If the Contractor knowingly performs any work contrary to such laws, ordinances, rules and regulations without having given such notice to the Owner, the Contractor shall bear all costs of required changes and be liable to the Owner for all damages arising there from.

205.04 PERMITS

- a. Permits, licenses and easements of a temporary nature, which are necessary only for and during construction, shall be secured and paid for by the Contractor, except those permits, licenses or easements of a temporary nature which are described in the Special Conditions as being provided by the Owner.
- b. Permits, licenses, and easements of a permanent nature, which are necessary to be maintained after acceptance of construction, shall be secured and paid for by the Owner.

205.05 INDEMNITY

- a. The Contractor shall indemnify, defend and hold harmless the Owner and the Owner's officers, partners, agents, employees and servants from and against any and all claims, judgments, liens, loss, damage, cost, charge or expense including defense costs, court costs and attorneys' fees, whether direct or indirect, by reason of liability imposed by law or by contract upon the Owner or said other parties because of bodily injuries, including death at any time resulting there from, sustained by any person or persons or on account of damages to property, including loss of use thereof, arising out of or in consequence of the performance of the Contract whether such injuries to or death of persons or damages to property are due or are claimed to be due to operations, errors, omissions, or negligent acts of the Contractor, its Subcontractors, the Owner, and said other parties, excepting only such injuries or damages as shall have been finally determined to have resulted solely from the errors, omissions or negligent acts of the Owner or said other parties or independent contractors directly responsible to the Owner.
- b. The Contractor shall indemnify, defend and hold harmless the Owner and Owner's, officers, partners, agents, employees and servants from and against any and all claims, judgments, liens, loss, damage, cost, charge or expense including defense costs, court costs and attorneys' fees, whether direct or indirect, by reason of casualties to the use thereof, whether such casualties to the Work are due or claimed to be due to operations of the Contractor, its Subcontractors, the Owner, or said other parties, excepting only such casualties as shall have been finally determined to have resulted solely from the errors, omissions or negligent acts of the Owner or of said other parties, or independent contractors directly responsible to the Owner.

205.06 GENERAL LIABILITY INSURANCE

- a. Coverage

The Contractor shall purchase and maintain General Liability Insurance covering bodily injuries, including death at any time resulting there from, sustained by any person or persons and damages to property, including loss of use thereof, arising out of or in consequence of the performance of the Contract, whether such injuries to or death of persons or damages to property are due or are claimed to be due to operations, errors, omissions or negligent acts of the Contractor, its Subcontractors, the Owner, or any of the Owner's officers, partners, agents, employees or servants, excepting only such injuries or damages as shall have resulted solely from the operations, errors, omissions or negligent acts of the Owner or of the said other parties, or independent contractors directly responsible to the Owner.

b. Insurance Amounts

Such General Liability Insurance shall be in an amount not less than \$1,000,000 combined single limit per occurrence for bodily injuries and/or death and/or property damage. Provided that, with respect to the Owner, the amount of such insurance shall not exceed \$100,000 for bodily injuries or death to any one person, \$1,000,000 for bodily injuries or death of any number of persons in one occurrence and \$25,000 for property damage in any one occurrence, or such other amounts as are specified in the Oklahoma Governmental Tort Claims Act with respect to the Owner.

c. Insurance Period

Such General Liability Insurance shall be maintained in effect until final acceptance by the Owner of completed construction and, for products liability and completed operations liability, at least two years thereafter.

d. Insurance Form

Such General Liability Insurance shall indemnify and defend the Contractor, its Subcontractors, the Owner and all of the Owner's officers, partners, agents, employees and servants from and against any and all claims, judgments, liens, loss, damage, cost, charge or expense, including defense costs, court costs and attorneys' fees, whether direct or indirect, by reason of liability imposed by law or by contract upon said parties, including Operations/Premises Liability, Completed Operations and Products Liability, Broad Form Blanket Contractual Liability, Contingent Employers or "Stop Gap", Owned, Nonowned, and Hired Vehicles and Equipment, and Broad Form Property Damage, including explosion, collapse and underground damage and loss of use. Such General Liability Insurance shall be provided on a comprehensive bodily injury or property damage liability form satisfactory to the Owner with a cross liability clause and shall name the Owner as an insured.

205.07 WORKMEN'S COMPENSATION

a. Insurance Requirements

The Contractor and its Subcontractors shall purchase and maintain industrial accident or workmen's compensation insurance issued by the State or, if state insurance is not available, issued by a private company covering bodily injuries, including death at any time resulting there from, suffered or alleged to have been suffered by any employee of the Contractor or its Subcontractor by reason of or in the course of operations under the Contract.

b. Insurance Amount

The amount and type of such industrial accident or workmen's compensation insurance shall be that required by law for all employees employed under the Contract who may come within the protection of such laws, and in the absence of such laws, the amount and type shall be that required by the Owner.

c. Insurance Period

Such industrial accident and workmen's compensation insurance shall be maintained in effect until final acceptance of completed construction.

205.08 CASUALTY INSURANCE

a. Insurance Requirement

The Contractor shall purchase and maintain Builders' Risk "All-Risk" insurance covering loss by casualty of all or any part of the Work whether completed or not to indemnify itself from losses imposed by law or assumed under the Contract by the Contractor. Such insurance shall include, but not be limited to, loss by fire, earthquake, landslide, flood, damage resulting from faulty workmanship, materials, design or construction furnished by the Contractor, and vandalism. The Contractor and Owner shall each be named as insureds as their interests may appear.

b. Insurance Amount

Such Builders' Risk "All-Risk" insurance shall be equal to the Total Contract Amount.

c. Insurance Period

Such Builders' Risk "All-Risk" insurance shall be maintained in effect until final acceptance of completed construction.

205.09 CERTIFICATION AND CANCELLATION OF INSURANCE

a. All insurance required under the Contract shall be provided on policy forms and by companies satisfactory to the Owner.

b. Bidder shall name Siemens Energy, Inc. and its Subcontractors as "additional insureds" under Bidder's Commercial General Liability and Automobile Liability policies to the extent that bodily injury (including death) or third party property damage results from the negligent acts or omissions of such subcontractor or its lower-tier subcontractors. The Bidder's Commercial General Liability and Automobile Liability policies shall contain "separation of insureds" clauses and the coverage afforded to additional

insureds shall apply as primary and noncontributing with any other coverage available to such additional insureds.

- c. The Contractor shall not cause any insurance policy to be canceled, permit any policy to lapse or reduce the amount of such insurance during the period of the Contract. All insurance policies shall include a provision to the effect that the insurance policy shall not be subject to cancellation, lapse, or to a reduction in the amount of insurance until written notice has been delivered to the Owner by the insuring company stating the date that such cancellation, lapse or reduction shall be effective, which date shall not be less than 15 days after the delivery of such notice.

- d. Within 10 days after delivery of Notice to Apparent Low Bidder and prior to execution of the Contract, the Contractor shall file with the Owner certificates from its insurance companies certifying to the coverage of all insurance required herein and, if required in the Special Conditions, furnish copies of all insurance policies. All certificates of insurance shall be authenticated by the proper officer of the insurer and shall certify the names of those insured, the type and amount of the insurance, the location and operations to which the insurance applies, the expiration date, and that the insuring company will give notice to the Owner at least 15 days prior to the effective date of any cancellation, lapse, or reduction in limits.

PART 2 - GENERAL CONDITIONS

SECTION 206 - PROGRESS AND COMPLETION

206.01 NOTICE TO PROCEED

At some time after the execution of the Contract, written Notice to Proceed will be given by the Owner to the Contractor. The Contractor shall begin work within 30 days after delivery of the Notice to Proceed and shall continue regularly thereafter, unless otherwise directed in writing by the Owner or duly constituted authority, with such work force, materials and equipment as to ensure the completion of the Work within the Construction Time or Construction Times stated in the Contract Documents.

206.02 TIME

All times and time limits stated in the Contract Documents shall be of the essence of the Contract. All references to days shall mean calendar days and the time within which acts are to be done shall be computed by excluding the first and including the last day, and if the last day is a Sunday or legal holiday where the act is to be performed, the act shall be completed on the next business day.

206.03 CONSTRUCTION TIME

The Contractor agrees to complete the Work and any specified portions thereof to the reasonable satisfaction of the Owner within the number of days of Construction Time or Construction Times set forth in the Special Conditions or the Proposal, whichever is earlier, except for unavoidable delays as defined herein. All changes in Construction Time or Construction Times shall be made only by Change Orders to the Contract.

206.04 CONSTRUCTION SCHEDULE

- a. The Contractor will be required to meet the schedule as provided in the Owner's Engineer's Technical Specifications.
- b. If the Contractor's actual progress fails to meet the Construction Schedule, the Contractor shall increase its work force and equipment as required to bring the actual progress of its operations into conformance with the Construction Schedule without additional cost to the Owner.
- c. The Contractor's Requests for Payment will be considered and payments made by the Owner on the basis of the Contractor's actual progress in relation to the dates shown in Part 2, General Conditions, Section 207, Measurement and Payment, Section 207.01, Payment of the Contract Amount for completion of various parts of the Work. During the course of

construction the Contractor shall enter on the Construction Schedule its estimate of progress at the end of each calendar month, or at such more frequent intervals as directed by the Owner, and shall deliver two (2) copies to the Owner and one (1) copy to Owner's Engineer with each submittal of the Contractor's Request for Payment.

- d. If, at any time, the Contractor desires to change the scheduling of its operations from that required by the Construction Schedule, it shall submit proposed revisions to the Owner along with supporting data to show the effect of such revisions on the Project. The Owner may choose to accommodate minor revisions for activities not affecting Construction Time or Construction Times without formal modification of the Construction Schedule. All changes of Construction Schedule which include a change of Construction Time or Construction Times shall be made as Change Orders to the Contract.

206.05 CHANGES IN CONTRACT

- a. If the Contractor claims that the Owner's Instructions or additional requirements of the Owner, by drawings or otherwise, entitle the Contractor to additional payment or extension of time under the Contract, the Contractor shall deliver to the Owner a written proposal of changes in the Total Contract Amount and Construction Time or Construction Times within 10 days after the receipt of such instructions or requirements and before proceeding to execute the changes. Failure of the Contractor to deliver such a proposal shall constitute a waiver by the Contractor of any claim for additional payment or extension of time. When the Owner and the Contractor are in agreement as to changes in the Total Contract Amount and Construction Time or Construction Times, the Owner will issue a Change Order to the Contract for approval of the Owner and the Contractor.
- b. By proper action of its governing body and without invalidating the Contract, the Owner may order changes in the Contract Documents requiring changes in construction provided such changes are within the general scope of the Contract. No official, employee, agent or representative of the Owner, with the exception of the governing body empowered to accept and authorize execution of the Contract, shall have power to authorize any change in the Contract. It shall be the responsibility of the Contractor, before proceeding with any change, except a change which is an emergency in the opinion of the Owner, to determine that the execution of a Change Order has been properly authorized on behalf of the Owner by its governing body. When a change in the Contract is ordered by the Owner, a Change Order shall be executed by the Owner and the Contractor.

206.06 EXTENSION OF TIME

- a. Should the completion of construction required under the Contract be delayed beyond the Construction Time or Construction Times herein

specified, the Owner may execute a Change Order granting the Contractor additional time for completion. If the failure of the Contractor to complete the Work within said specified time results from unavoidable delay as hereinafter defined, the Construction Time or Construction Times shall be extended by the number of days lost as a result of the unavoidable delay, provided, however, that the Contractor shall make a claim to the Owner in writing for such extension of time as herein provided. In considering applications for extension of time, the Owner shall classify delays according to the following definitions:

- (1) Unavoidable delays in the prosecution or completion of the Work shall include delays in completion due to Contract modifications ordered by the Owner, unforeseeable delays in the completion of the construction of other contractors employed by the Owner, floods, fire, war, the public enemy and Acts of God, insofar as they necessarily interfere with the Contractor's completion of the Work. Delay due to adverse weather conditions, except for Acts of God, Will Not be regarded as unavoidable delays as the Contractor shall plan its construction with prudent allowance for such conditions.
 - (2) Avoidable delays in the prosecution or completion of the Work shall include all delays which in the opinion of the Owner could have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or its Subcontractors. Delays in the prosecution of parts of the Work which may in themselves be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the Work within the time herein specified; reasonable loss of time resulting from the necessity of submitting Shop Drawings to the Owner for review and from the making of surveys, measurements, and observations; and such interruptions as may occur in the prosecution of the Work on account of the reasonable interference of other contractors employed by the Owner which do not necessarily prevent the completion of the Work within the time herein specified, shall constitute avoidable delays within the meaning of the Contract.
- b. Claims for extension of time shall be made in writing to the Owner no later than 10 days after occurrence of the event causing the delay. In the event of continuing cause of delay, only one claim shall be necessary if the claim notice indicates its continuing nature. Failure to make such claim within the time specified shall constitute waiver of such claims.
 - c. No claim for delay shall be allowed on account of failure to furnish construction drawings until 10 days after written request for such drawings has been made by the Contractor to the Owner. There may be some construction drawings which cannot be made until certain work has been done by the Contractor. Request for such construction drawings shall not be effective, so as to start the running of the 10 day period, until the

Contractor's work has advanced to the point which will enable and require such construction drawings to be made.

206.07 OWNER'S USE OF CONSTRUCTION

- a. The Owner shall have the right to take possession of, use and collect revenues from any completed, partially completed, satisfactory or unsatisfactory portions of the Work after the time for completion of the Work has expired, but such taking possession and use shall not be deemed an acceptance of any construction not completed in accordance with the Contract Documents.
- b. The Owner will be responsible for all damages incurred as a result of use of the Work except when such damages occur as a result of incomplete construction or faulty workmanship or materials. Prior to using any portion of the Work, the Owner will file with the Contractor an inventory of construction yet to be completed.
- c. The Owner will hold harmless the Contractor for injury or death to persons or damage to property incurred as direct result of the Owner's use of the Work; provided, that said injury, death or damage is not a result of the Contractor's negligence and did not occur as a result of the construction being not completed by the Contractor. The Contractor shall not be entitled to any extra compensation for or extension of time due to costs to the Contractor arising from the use of any portion of the Work by the Owner.

PART 2 - GENERAL CONDITIONS

SECTION 207 - MEASUREMENT AND PAYMENT

207.01 PAYMENT OF THE CONTRACT AMOUNT

- a. The Owner hereby agrees to pay to the Contractor as full compensation for the complete performance of the Contract a sum of money equal to the Total Contract Amount. All payments, except for the final payment, shall be subject to the withholding of 5% of the payment amount as Retained Amount pursuant to the Public Competitive Bidding Act (61 O.S. § 113.1 – Partial Payment – Retainage). Progress payments will be made on the following schedule.

(1)	Contract Signing	5% of Total
(2)	Upon Owner's approval of any and all required submittals by contractor, and completion of engineering drawings for construction and acceptance by Owner's Engineer.	15 % of Total
(3)	Delivery of Goods to contractor's fabrication shop complete.	30% of Total
(4)	Completion of pad construction, footings, and foundations.	10% of Total
(5)	Erection & insulation of all tanks and associated equipment, if any.	30% of Total
(6)	Upon successful testing & placed into service	10% of Total
(7)	30 days after final acceptance by Owner including completion of any punch list items as per Section 207.04 Partial Payments, subsection (f).	Release of Retained Amount

- b. The making or method of any payment to the Contractor under the Contract shall not relieve the Contractor of any obligations thereunder. The Contractor is obligated to complete the Contract in its entirety and to deliver to the Owner such completed construction as is specified in the Contract. Until the Contract is fully performed by the Contractor, the Contractor shall be obligated to repair, replace, restore, or rebuild any fully or partially completed construction required to be provided under the Contract which may not be in conformance with the Contract; provided, however, at the option of the Owner, with respect to any portion of the Work, this particular obligation of the Contractor may be terminated by the Owner upon the completion by the Contractor and acceptance by the Owner of such portion,

and such portion shall become the sole property and responsibility of the Owner when acceptance and payment therefore is made, except that the Contractor's warranty and Performance and Labor and Material Payment Bonds shall remain in force for the period provided herein.

207.02 PAYMENT FOR CHANGES

Payment for all changes in lump sum items shall, at the option of the Owner, be determined in one of the following ways:

- (1) by Contractor's proposal and Owner's acceptance of reasonable lump sum prices, or
- (2) by payment to the Contractor on a cost basis plus certain allowances as follows:

Items for which payment will be made on a cost <u>plus basis</u>	Percentage allowance for overhead and profit in addition to net <u>cost</u>
Labor	20%
Materials and equipment	10%
Use of Equipment	15%

207.03 PAYMENT FOR UNCORRECTED CONSTRUCTION

If, in the opinion of the Owner, it is inexpedient, impractical or otherwise not in the best interests of the Owner, to correct construction which has been damaged, which is faulty, or which has not been furnished in accordance with the Contract, an equitable reduction in the Total Contract Amount shall be made.

207.04 PARTIAL PAYMENTS

- a. Partial payments of the Total Contract Amount will be made as specified in the Contract Documents.
- b. The Contractor may submit to the Owner, not later than the 10th day of each month, a Contractor's Request for Payment for construction completed during the previous calendar month. An additional copy shall be submitted to Owner's Engineer at the same time. Such Contractor's Request for Payment shall be in the form provided in the Special Conditions. With each Contractor's Request for Payment, the Contractor shall, if required, submit satisfactory evidence of payment, for materials and labor, including payments to Subcontractors, made during the previous month. Each Contractor's Request for Payment shall be computed from construction

completed on all items listed in the Bid Schedule less the Retained Amounts specified and less all previously approved Contractor's Requests for Payment. Partial payment may be made for partially completed construction to the extent completed in the opinion of the Owner.

- c. Partial payments on Change Orders previously executed by the Owner may be made periodically at the same time and in the same manner as partial payments on the Total Contract Amount.
- d. Within 20 days after proper submission of Contractor's Request for Payment by the Contractor, the Owner will:
 - (1) authorize payment of the Contractor's Request for Payment submitted, or
 - (2) authorize payment of such other amount as is due the Contractor, in the opinion of the Owner, informing the Contractor of the amount authorized.
- e. The Owner may authorize a partial payment to the Contractor, on the basis of the Contractor's Request for Payment, but the Owner will withhold a Retained Amount as specified in the Special Conditions and such other amounts as are deemed appropriate.
- f. The Retained Amount will be held by the Owner as a fund for the protection and payment of any person or persons, mechanic, Subcontractor, or material supplier who shall perform any labor under the Contract or construction thereunder, and all persons who shall supply such person or persons or Subcontractors with materials and supplies for the carrying on of such Work. Said fund will be retained for a period of 30 days following the acceptance of the completed construction under the Contract, and every person performing the labor or furnishing materials and supplies toward the completion of said construction shall have a lien upon said fund provided proper notice of the lien be given as required by law. Following such 30 day period, the fund or the amount thereof in excess of a sum sufficient to meet and discharge the claims of material suppliers and laborers who have duly filed their claims under the law, together with a sum sufficient to pay the cost of such action and to pay attorneys' fees, will be paid to the Contractor.
- g. Quantities used for estimating partial payments shall be considered only as approximate and provisional, and shall be subject to recalculation, adjustment and correction by the Owner in subsequent partial payments and in final payment. Inclusion of any quantities in partial payments, or failure to reject construction at the time of partial payment, shall not constitute acceptance of the corresponding construction.

- h. The Contractor, or any of its Subcontractors, may at the Contractor's option secure "Off-site" warehouse space for storage of materials for this Project which the Owner transfers to the custody of the Contractor, provided that:
- (1) the warehouse shall be bonded, structurally sound, dry, lighted and suitable for the materials to be stored,
 - (2) the warehouse shall be within a 25-mile radius of the Project, except that another location may be utilized, if approved in writing by the Owner,
 - (3) only materials for the Project shall be stored within the warehouse or a secure portion of the warehouse set aside for the Project,
 - (4) the Contractor shall furnish the Owner a Certificate of Insurance extending its insurance policy for damage, fire, and theft to include the full value of all materials stored, and while in transit,
 - (5) the warehouse or secure portion thereof shall be continuously under lock and key and only the Contractor's authorized personnel shall have access,
 - (6) the authorized representatives of the Owner shall at all times have the right of access to the warehouse space in company of the Contractor, or its authorized representative,
 - (7) the Contractor and its bonding company shall accept total responsibility for all materials stored in such warehouse space,
 - (8) the Contractor shall furnish to the Owner certified lists of the materials stored, and other information as may be required, and also notice of the time when said materials are to be moved from the warehouse to the Project site, and
 - (9) the Contractor shall furnish the Owner a statement from its bonding company of acknowledgment and consent to the inclusion of the "Off-site" storage as a part of its contractual and bonding responsibilities.
- i. Neither the Owner's right of access or the acceptance of certified lists of materials stored "Off-site" shall relieve the Contractor or its bonding company of any responsibility under this Contract, nor shall such actions result in liability on the part of the Owner.
- j. If requested by the Owner, the Contractor shall include with each Request for Payment, after the first, an affidavit stating that all Subcontractors and Supply Contractors have been paid, less earned retainage, as their interests appeared in the last payment received, and shall be accompanied by a

signed receipt from each Subcontractor and Supply Contractor that they have received payment for the previous month's work, less earned retainage, and an affidavit by such Subcontractors stating that all Subcontractors, suppliers, wages, fringes and taxes arising out of such subcontracts have been paid as their interests appeared in the last payment received.

- k. When so requested by the Owner as specified above, no Request for Payment by the Contractor will be processed unless accompanied by such Contractor's affidavit. In the event the Subcontractors and Supply Contractors fail or refuse to furnish such receipt and affidavit and the Contractor certifies to such failure or refusal, then no payment will be allowed on account of work, labor, supplies, or materials furnished by such Subcontractor or Supply Contractor.

207.05 PAYMENTS WITHHELD

- a. In addition to the Retained Amount provided for in the Special Conditions, the Owner may withhold such amounts from any payment as may be necessary, for protection from loss on account of:
 - (1) defective construction not remedied or the cost of defective construction remedied by the Owner,
 - (2) claims filed or reasonable evidence indicating probable filing of claims,
 - (3) failure of the Contractor to make payments promptly to its own employees or to Subcontractors for materials or labor within a reasonable time after the Contractor has received the material or labor for incorporation into the Work,
 - (4) a reasonable doubt that the Contract can be completed by another contractor for the balance then unpaid,
 - (5) damage to another contractor or subcontractor,
 - (6) bankruptcy, receivership or insolvency of, or the pendency of such proceedings against the Contractor,
 - (7) costs of the Owner for engineering or other work as provided in the Contract Documents to be reimbursed to the Owner by the Contractor,
 - (8) failure of the Contractor to complete any part of the Work in accordance with the Construction Schedule,

- (9) failure of the Contractor to furnish a satisfactory Construction Schedule or estimates of progress as required by Section 206, and
- (10) credits refused by the Contractor for Construction deleted.

207.06 ACCEPTANCE AND FINAL PAYMENT

- a. When the Contractor has completed the Work in accordance with the terms of the Contract Documents and all construction has operated satisfactorily for not less than the 15 days after completion, the Contractor shall submit to the Owner a Contractor's Final Request for Payment, Statement Concerning Claims, Release and Waiver of Liens and such other completed documents as may be required by the Owner for the release of any monies held.
- b. The Contractor's Final Request for Payment shall be prepared on the basis of the Contract, including all authorized Change Orders, but not inclusive of proposals or claims of the Contractor which have not been accepted by executed Change Order. The Contractor's Final Request for Payment shall constitute a waiver of all claims by the Contractor except for unsettled claims specifically stated in the Contractor's Statement concerning claims.
- c. The Statement Concerning Claims shall warrant that the Contractor has fully completed the performance of the Contract and has fully paid for all labor, materials, equipment, services, taxes and all other costs and expenses of every nature and kind whatsoever resulting from the Contract. If any dispute exists between the Contractor and any person, partnership or corporation to which the Contractor might be obligated in connection with the Contract, the Contractor shall state the name of the claimant, the amount and the general nature of the claim against the Contractor. Such Statement Concerning Claims shall so state the amount and nature of all present and future claims that the Contractor may have against the Owner relative to the Contract in addition to the Contractor's Final Request for Payment.
- d. Upon receipt of the Statement Concerning Claims, Release and Waiver of Liens, Contractor's Final Request for Payment, and any other documents necessary for the release of monies held the Owner will, within a reasonable time, take action on the Contractor's Final Request for Payment and on acceptance of construction. Such action shall be subject to the conditions of the Performance and Labor and Material Payment Bonds, legal and contractual rights of the Owner, required warranties, and correction of faulty construction after final payment. The Owner shall have the right to retain from any payment then due the Contractor, so long as any bills or claims remain unsettled and outstanding, a sum sufficient, in the opinion of the Owner, to provide for the payment of the same. It is also understood and agreed that, in the event of any breach by the Contractor of the provisions hereof, the Owner may retain from any payment or payments, which may become due hereunder, a sum sufficient, in the opinion of the Owner, to

compensate for all damages occasioned by such breach, including any damages arising out of delay on the part of the Contractor.

- e. By proper action of its governing body, the Owner may act relative to the acceptance of construction. No official, employee, agent or representative of the Owner, with the exception of the governing body empowered to authorize execution of the Contract, shall have the power to accept construction.
- f. Acceptance of construction will be evidenced by a Notice of Acceptance of Construction in writing signed by a duly authorized official of the Owner in the manner provided for written notices. No other act of the Owner shall constitute acceptance of construction.
- g. 30 days after the Owner has accepted the construction, the Contractor may submit a Request for Payment of the Retained Amount; provided, however, that the Owner may also retain such additional amounts and for such lengths of time as may be required by law or by the Special Conditions. If any liens remain unsatisfied after payment of the Retained Amount is made, the Contractor shall immediately reimburse the Owner such amounts as the Owner may have been compelled to pay in discharging such liens including all costs and reasonable attorney's fees.

207.07 CONSTRUCTION FURNISHED PRIOR TO NOTICE TO PROCEED

Notwithstanding any other provision of the Contract, the Owner shall not be obligated to accept or to pay for any construction furnished by the Contractor prior to delivery of Notice to Proceed whether or not the Owner has knowledge of the furnishing of such construction.

207.08 SALES AND SIMILAR TAXES

Prices provided for in the Contract Documents are exclusive of Sales or Use Taxes for the reason that the Owner is, by law, exempt from such taxation. The Contractor shall be appointed an agent of the Owner for the purposes of making tax-exempt transactions in the performance of the Contract. In the event, however, a change in law effectively results in the cancellation of such agency, then in that event the Owner will reimburse the Contractor for monies expended directly on such taxes covered by the agency appointment. The Contractor shall provide proof of payment of taxes and shall file appropriate claims in accordance with the payment article of the Contract.

The Contractor shall be responsible for payment of any other applicable taxes or governmental charges.

207.09 CREDIT

In the event construction is deleted or modified, or specified material, equipment, method or process is substituted which results in a reduction in cost, the Owner shall be

entitled to a credit in an amount equal to such reduction or such other negotiated amount as to which the Owner might agree.

PART 2 - GENERAL CONDITIONS

SECTION 208 - ADDITIONAL REQUIREMENTS FOR GENERAL CONSTRUCTION

208.01 PRECONSTRUCTION CONFERENCE

Before the Contractor begins Work at the Project site, a conference will be held at a time and place determined by the Owner to review the preliminary Construction Schedule required by Section 206, to review procedures for handling submittals and communications, to set forth the responsibilities and authority of key personnel and to discuss permits, utility interferences and other special considerations relating to the Contract.

208.02 OWNER'S OPERATIONS

The Contractor shall schedule all construction so as not to interfere with the operations of the Owner. Where such interference is essential to prosecution of the Work, special arrangements shall be made and the written consent of the Owner as to time and method obtained 48 hours in advance of construction.

208.03 OWNER'S CONSTRUCTION

In connection with the Project the Owner reserves the right to furnish construction which is not included in the Contract by the Owner's forces, the service forces of operating utilities or the forces of other contractors.

208.04 OTHER CONTRACTS

- a. The Contractor shall ascertain to its own satisfaction the scope of the Project and the nature of any other contracts that have been or may be entered into by the Owner in the prosecution of the Project, so that the Contractor may perform the Contract in coordination with such other contracts, if any. Nothing herein contained shall be interpreted as granting to the Contractor exclusive occupancy of the project site. The Contractor shall not cause any unreasonable hindrance or delay to any other contractor working on the Project site. If, in the opinion of the Owner the performance of the Contract is likely to be interfered with by the simultaneous performance of some other contract or contracts to which the Owner is a party or by the Owner's own forces, the Owner is not obligated to decide which contractors shall cease a part or all of their construction temporarily and which contractors shall continue, or whether the construction under all contracts can be coordinated so that all contractors may proceed simultaneously. The Owner shall not be responsible for any delays or damages suffered or extra costs incurred by the Contractor resulting directly or indirectly from the performance, failure to

perform, or attempted performance by any other contractor or any other contract.

- b. The Contractor shall give other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their construction at the Project site and shall properly connect and coordinate its construction with theirs. If other contractors are working in the same area, with equal rights and privileges, it shall be the responsibility of the Contractor to make whatever arrangements with said other contractors as are necessary for the proper execution and coordination of construction.
- c. If any part of the Contractor's construction depends upon the construction of any other contractor for proper execution or results, the Contractor shall inspect the other contractor's construction, and at least 10 days prior to the time the Contractor begins construction on such part, report to the Owner in writing any defects in such other contractor's construction that renders it unsuitable for such proper execution and results. Failure on the part of the Contractor to so inspect and report shall constitute an acceptance of the other contractor's construction as fit and proper for the reception of the Contractor's construction, except as to defects which may subsequently develop in the other contractor's construction.
- d. The Contractor agrees to save the Owner harmless from any claim, suit or demand of any other contractor by reason of the failure of the Contractor to conform with the Construction Schedule.

208.05 LANDS BY OWNER

Unless otherwise provided in the Special Conditions, the Owner will provide only the lands upon which the construction under the Contract is to be located, together with the right-of-access to such lands. The Contractor shall confine its equipment, storage of materials, and construction operations to such limits as may be directed by the Owner, and shall not unreasonably encumber the premises with its materials.

208.06 LANDS BY CONTRACTOR

The Contractor shall provide at its own expense and with no liability to the Owner any additional lands, and access thereto, not shown or described in the Contract Documents that may be required for temporary construction facilities, storage areas, borrow areas and spoil areas. The Contractor shall confine its equipment, storage and other operations to those areas described in the Contract Documents and such additional areas as it provides at its own expense.

208.07 EMPLOYEES

The Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ or continue to employ on the Project anyone not skilled in the work assigned or any person unsatisfactory to the Owner. Neither the Owner nor the

Contractor shall offer employment to any employee of the other party, or to any employee of another contractor to the other party, without the consent of the other party first having been obtained.

208.08 PROJECT SAFETY

- a. The Contractor shall exercise all reasonable precautions for the safety of its employees and of the general public and of the Owner's employees, and shall comply with all applicable provisions of federal, state, and municipal safety laws, building and construction codes and the safety rules and other regulations of the Owner, including, but not limited to, the requirements of the U.S. Occupational Safety and Health Administration (OSHA) or applicable State statutes in lieu thereof. The Contractor shall also comply with the recommendations in the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America insofar as applicable, unless such recommendations are incompatible with federal, state, or municipal laws or regulations. Monthly reports of all lost-time accidents shall be promptly submitted to the Owner and shall include such data as are requested by Owner.
- b. The Contractor shall enforce all instructions of the Owner regarding signs, advertising, fires, danger signals, barricades and smoking and shall require all persons employed on construction to comply with all building, post or institutional regulations while on the premises. The Contractor shall require all employees to be familiar with and comply with the Owner's safety regulations. The Contractor shall not permit any part of any structure to be loaded in excess of its maximum allowable loading or in a manner that will otherwise jeopardize its safety or the safety of adjacent property.
- c. The Contractor shall provide adequate signs, barricades, signal lights, and watchmen and shall take all necessary precautions for the protection of construction and the safety of the public. All barricades and obstructions shall be protected at night by satisfactory signal lights which shall be kept lighted from sunset to sunrise. Barricades shall be of substantial construction and shall be painted white to increase their visibility at night.
- d. The Contractor shall at all times so conduct its work as to ensure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the Project, and to ensure the protection of persons and property in a manner satisfactory to the Owner. No road or street shall be closed to the public except with the permission of the Owner and the proper governmental authority.
- e. The Owner shall not be responsible for safety on the Project site, including, but not limited to, providing or assuring a safe place for the performance of construction, methods of construction employed by any contractor, subcontractor, supplier or other entity or their partners, officers, agents, employees or servants or for access, visits, use, work, travel or occupancy

by any person of for compliance of the Project site and construction with applicable local, state and federal health and safety laws and regulations.

208.09 INSTRUMENT SURVEYS

- a. The Owner will furnish the instrument surveys necessary to establish certain bench marks, base lines and property boundaries specifically noted on the Contract Drawings and such construction surveys, if any, as are specifically described in the Special Conditions. From the information provided by the Owner, the Contractor shall develop and make such additional detailed surveys as are needed for construction, such as slope stakes, batter boards, stakes for pile locations and other working points, lines and elevations.
- b. All bench marks, base lines, and property boundaries, as originally established by the Owner, shall thereafter be maintained by the Contractor who shall be responsible for maintaining their accuracy and who shall pay to the Owner the reasonable cost to the Owner of their establishment if they are disturbed. The Contractor shall notify the Owner in writing at least 10 days in advance of the time the Contractor will begin work on any part of the Work requiring surveys to be furnished by the Owner.
- c. The Contractor shall provide reasonable and necessary opportunities and facilities to the Owner for setting points and making measurements during construction.

208.10 PROTECTION OF PROPERTY

- a. The Contractor shall continuously maintain adequate protection of all its construction, the Owner's property and the adjacent public and private property from damage, injury, or loss arising from construction. The Contractor shall pay for any damage, injury or loss resulting from lack of adequate protection.
- b. The Contractor shall not enter upon public or private property for any purpose without obtaining permission from the proper public authority or private property owner. Construction on state highways, county roads, or any public right-of-way shall meet the requirements of the authority having jurisdiction over such right-of-way. It shall be the Contractor's responsibility to notify said authority before beginning construction on right-of-way, and to ascertain that the schedule of operations proposed is satisfactory to the authority.
- c. Wherever construction under the Contract is undertaken on easements or rights-of-way over private property, or public right-of-way or franchise, all construction operations shall be confined to the limits of such easement, right-of-way or franchise and be completed so as to cause the least amount of disturbance and minimum amount of damage.

- d. Construction across public or private property shall be carried out in one continuous operation with immediate restoration and cleanup of the construction area. If the Contractor should fail to perform such construction, restoration and cleanup continuously, the Owner may give the Contractor a written notice to do so. In the event of failure by the Contractor to complete such construction, restoration and cleanup within 5 days after receipt of such notice, the Owner may complete same to the extent the Owner deems advisable. The cost of all labor, material, supervision and other expenses incurred by the Owner in so doing shall be paid by the Contractor to the Owner and if not paid, shall be deducted from any payments due the Contractor under the Contract.
- e. The Contractor shall protect and maintain all underground or above ground utilities and structures affected by its construction and all lawns, shrubs, trees, fences and other improvements on property crossed by or adjacent to its operations, and shall repair and restore in a satisfactory manner at its expense all damage resulting from the Contractors' operations. The Contractor shall be responsible for all damages caused by its construction to roads, highways, ditches, walls, bridges, culverts, utilities, barricades, lights or other property, whether such damage be at the Project site or elsewhere, and the Contractor shall repair or replace at its own expense all such damage in a satisfactory manner.
- f. It is expressly understood that the Contractor shall restore all easement and right-of-way property to a condition equal to its original condition. Before beginning construction the Contractor shall file with the Owner properly identified and dated photographs of such property as may be designated on the Contract Drawings or described in the Special Conditions.

208.11 CUTTING AND PATCHING

The Contractor shall at its own expense do all necessary cutting and patching of its construction that may be required in order to properly receive the construction of other contractors on the Project or as required by the Contract Documents. The Contractor shall restore all such cut or patched construction to a condition satisfactory to the Owner. The cost resulting from replacement of defective cutting and patching of construction shall be borne by the Contractor.

208.12 CLEANUP

At the time of termination or suspension for an extended period of all or any portion of the Work, or at Completion but before final acceptance by the Owner, the Contractor at its own expense shall remove from the Owner's property and from all public and private property all of its equipment and unused materials for which the Owner has made no payment, temporary structures, rubbish and waste materials resulting from its operations and shall leave the Project site in a neat and orderly condition satisfactory to the Owner. The Contractor shall at all times during the progress of construction maintain the site in as neat and orderly a condition as construction operations will permit. In the event the

Contractor fails to do so, the Owner may remove and store such equipment and unused materials and dispose of rubbish and waste at the expense of the Contractor. The cost of such removal, storage, and disposal will be deducted from any payments due the Contractor under the Contract.

208.13 SANITARY PROVISIONS

The Contractor shall furnish and maintain for all workmen employed on the Project temporary toilet facilities of a type, number and location satisfactory to the Owner and all public authorities having jurisdiction. The Contractor shall maintain the same in a sanitary condition from the beginning of the Work until Completion and shall then remove the temporary toilet facilities and disinfect the premises.

208.14 INDEX OF ACCOUNTS

Prior to final payment and at the option of the Owner, the Contractor shall furnish to the Owner a complete accounting of the actual costs of labor, materials and other charges, together with all required documentation, in accordance with the Index of Accounts specified in the Special Conditions.

208.15 EXISTING UTILITIES AND IMPROVEMENTS

- a. The Contractor shall remove such existing improvements on the Project site as may be necessary for the execution of the Work and, unless otherwise specified in the Special Conditions, shall rebuild the existing improvements in as good a condition as found; provided that existing improvements which interfere with performance of the Work shall be maintained by the Contractor until their removal is authorized or directed by the Owner.
- b. The Contractor shall make all necessary arrangements and do all things required to avoid interference with the maintenance and operation of power, telegraph, telephone, water, sewer, gas and other utility lines, properties, and facilities of every kind, all in a manner satisfactory to the owners and operators thereof.
- c. If construction under the Contract crosses highways, railroads, streets, or other utilities under the jurisdiction of states, counties, cities, or other public bodies, public utilities, or private entities, the Contractor shall secure written permission from the proper authority before proceeding with such construction. A copy of this written permission shall be filed with the Owner before any construction is begun. The Contractor shall furnish written releases from the proper authorities before final acceptance of construction by the Owner.
- d. Existing utilities indicated on the Contract Drawings have been plotted from information currently available to the Owner. The source of information generally consists of construction record drawings and data obtained verbally from officials associated with the particular utility. The data are

shown on the Contract Drawings for whatever benefit the Contractor may derive, and, unless specific instructions or data concerning certain utilities are set forth in the Special Conditions, the data shown on the Contract Drawings shall not necessarily be considered precise or complete, and the Owner makes no guarantee as to completeness, precision or dimensions. This shall in no way relieve the Contractor from its responsibility for maintenance of existing utilities and performance of the Contract. Under no circumstance will errors or omissions in location of existing utilities or improvements whether they be visible from the surface, buried or otherwise obscured, be considered as a basis for additional compensation to the Contractor.

- e. The contractor shall be responsible for all damage to existing facilities during construction and shall restore all damaged facilities to their original condition to the satisfaction of the Owner at no cost to the Owner.
- f. The Contractor shall excavate at all points of connection to existing utilities prior to beginning installation of any portion of the new utilities. The Contractor shall excavate at all points of intersection of new utilities with existing utilities that are shown on the Contract Drawings or whose location can be readily determined in the field prior to beginning installation of new facilities. Excavation shall be to the extent necessary to expose the existing utilities to determine where a conflict in routing or elevation exists between the new and existing utilities.

PART 3 - SPECIAL CONDITIONS

SECTION 306 - STANDARD FORMS

306.01 USE OF STANDARD FORMS

The forms included in the following pages have been developed to facilitate the administration of this Contract. The Contractor shall use these forms for the initiation of all correspondence or action with the Owner. If no form is applicable to the problem being presented, the Contractor shall so advise the Owner.

Copies of these forms are available in quantities necessary for administration of this Contract at the office of the Owner.

PROGRESS PAYMENT

Contractor's Application for Payment No.

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Application For Payment Change Order Summary

Approved Change Orders				
Number	Additions	Deductions		
TOTALS				
NET CHANGE BY CHANGE ORDERS				

1. ORIGINAL CONTRACT PRICE.....	\$ _____
2. Net change by Change Orders.....	\$ _____
3. Current Contract Price (Line 1 ± 2).....	\$ _____
4. TOTAL COMPLETED AND STORED TO DATE	
(Column F on Progress Estimate).....	\$ _____
5. RETAINAGE:	
a. X _____ Work Completed.....	\$ _____
b. X _____ Stored Material.....	\$ _____
c. Total Retainage (Line 5a + Line 5b).....	\$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c).....	\$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
8. AMOUNT DUE THIS APPLICATION.....	\$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G on Progress Estimate + Line 5 above).....	\$ _____

Contractor's Certification	
By: _____	Date: _____

Payment of:	\$ _____	(Line 8 or other - attach explanation of the other amount)
is recommended by:	_____	_____
	(Engineer)	(Date)
Payment of:	\$ _____	(Line 8 or other - attach explanation of the other amount)
is approved by:	_____	_____
	(Owner)	(Date)
Approved by:	_____	_____
	Funding Agency (if applicable)	(Date)

STATEMENT CONCERNING CLAIMS

The Contract under that certain agreement dated _____
by and between _____ Contractor and
_____, Owner, states, represents and warrants that
Contractor has fully completed all construction included in the Contract and all authorized
Change Orders thereto, and has fully paid for all materials, equipment, supervision, labor,
services, taxes, use of equipment, and all other costs and expenses of the construction
and that there are no disputes, claims or liens against the Owner, the Contractor, or any
Subcontractor of Contractor, and that the Contractor will have no claims against the Owner
of any kind whatsoever arising from or growing out of the Contract except as follows:

<u>Claimant</u>	<u>Description of Claim</u>	<u>Amount</u>
-----------------	-----------------------------	---------------

Contractor

By _____

STATE OF)
) SS
COUNTY OF)

_____, being first duly sworn, on oath deposes and states,
that he is the _____ of the aforesaid Contractor, that he makes
this affidavit for and on its behalf and is authorized so to do, that he has read the foregoing
Statement Concerning Claims and has personal knowledge of the facts contained therein
and acknowledges said Statement Concerning Claims to be the free and voluntary act and
deed of the Contractor for the purpose of obtaining final payment under the Contract
described herein, that he was authorized to execute the same for and on behalf of the
Contractor and that said Statement Concerning Claims is true and correct.

SUBSCRIBED and SWORN to before me this _____ day of _____, 20__.

NOTARY PUBLIC in and for the
State of _____
residing at _____.

My Commission Expires _____

RELEASE AND WAIVER OF LIENS

With reference to Contract No. _____ dated _____, 20____,

as amended, between the undersigned Contractor _____

_____ and _____
(name of Contractor) (Owner)

for _____
(Project)

at _____
(location of Owner's premises)

the Contractor hereby certifies that it has made full payment of all costs, charges and expenses incurred by it or on its behalf for work, labor, services, materials and equipment supplied to the foregoing premises or used in connection with its performance under said Contract.

The Contractor further certifies that to its best knowledge and belief, each of its Subcontractors and material men has made full payment of all costs, charges and expenses incurred by them or on their behalf for work, labor, services, materials and equipment supplied to the foregoing premises or used by them in connection with said Contract.

In consideration of \$_____ as final payment, the Contractor here remisses, releases and forever discharges

(Owner)

its premises and property, from all bills, liens and claims of every nature arising out of or in connection with the performance of said Contract and any amendments thereto, except as set forth in the Contractor's Statement Concerning Claims.

The foregoing shall not relieve the Contractor of its obligations under the provisions of said Contract, as amended, which by their nature survive Completion of the Work including, without limitation, warranties, guarantees and indemnities.

Executed this _____ day of _____, 20_____.

By _____

Title _____

CHANGE ORDER No. _____

Date _____ C.O. No. _____

Contract Title _____ Contract No. _____

Basis for Change

(Contractor shall attach explanation for requested change in Contract.)

Contractor Amount

Original Total Contract Amount \$ _____

Net Amount from Previous Change Orders \$ _____

This Change Order Amount \$ _____

New Total Contract Amount \$ _____

Time for Completion

Original Completion Date _____

Net Time Extension from Previous Change Orders... _____

This Change Order Extension _____

New Completion Date _____

1. Accepted By:

2. Recommended for Approval By:

Contractor

Sargent & Lundy, LLC

Signature

Signature

Title Date

Title Date

3. Approved by:

Oklahoma Municipal Power Authority

Signature Title Date

PART 3 - SPECIAL CONDITIONS

SECTION 307 - SPECIFICATIONS FOR CONSTRUCTION

307.01 SCOPE OF WORK

The work to be done includes the engineering, designing, procuring, manufacturing, furnishing, and delivering f.o.b. freight prepaid to the CDLEC project site all necessary material, labor, tools, equipment, supplies and miscellaneous items required for the complete construction of the Oklahoma Municipal Power Authority Charles D. Lamb Energy Center Raw/Fire Water and Demineralized Water Field-Fabricated Tanks, all in accordance with the Contract Drawings and the Charles D. Lamb Energy Center Raw/Fire Water and Demineralized Water Field-Fabricated Tanks technical specifications.

307.02 MATERIALS

The materials required for this Contract may be furnished by the Owner.

In the event materials are provided by Owner, it is anticipated that the majority of the material and equipment provided by the Owner will be delivered prior to the Contractor starting construction. The material and equipment will be in the custody and under the control of the Owner until it is transferred to the custody of the Contractor for use on the project. The Contractor will be considered to have custody of material on his vehicles, material in a building or enclosure owned, leased or rented by the Contractor, and material distributed or installed by the contractor at work locations on the project which have not been formally accepted as complete by the Owner.

307.03 DRAWINGS

The Drawings and Specifications collectively show the specifications of the material and equipment shown thereon. The drawings and detail specifications are made a part of these Contract specifications. The Contractor shall make a thorough examination of the Drawings and shall be responsible to detect any conflicts.

307.04 PROGRESSION OF WORK

As noted in the Contract, it is the responsibility of the Contractor to thoroughly examine the Specifications, the Drawings, and the Project site. The Contractor is expected to submit a bid based on his reputation, past performance record, and good faith by the Owner that the Contractor can successfully and skillfully complete the required work. Based on the professional skill of each qualified Contractor, the Owner expects a

thorough understanding of the specifications and drawings so that each Contractor may include sufficient funding in each unit at the time of bid so as not to endanger the Contractor's profit at a later date. Each Contractor is expected to skillfully plan and coordinate his labor and material and anticipated contingencies. Each Contractor is responsible to assure that Subcontractors and Suppliers have a clear understanding of the scope of work. The Owner will not pay any extra charges for remobilization by the Contractor or his Subcontractors.

The progression of work to timely complete construction and energize the Project shall be the responsibility of the successful Contractor. The Contractor shall provide sufficient qualified staff and equipment to perform construction at a rate which assures timely completion of the contract.

The contract price as stated by the Contractor in the Contract shall be inclusive for satisfactory and comprehensive Completion of all the project. Escalated charges for equipment, labor, testing, etc., resulting from any contingencies or delays are the responsibility of the Contractor.

307.05 LIQUIDATED DAMAGES

It is the intent of the Owner that the Contractor shall perform all of the work necessary to complete the CDLEC Raw/Fire Water and Demineralized Water Field-Fabricated Tanks as specified in this Contract Section 307.04. The Contractor agrees to pay the Owner liquidated damages in the amount of \$500.00 per day of each day beginning September 1, 2014 to and including the day the Contractor completes the specified work on the CDLEC Raw/Fire Water and Demineralized Water Field-Fabricated Tanks. The Contractor will not be charged for late days attributed to an "Act of God" (such as floods, tornadoes, etc.).

307.06 EXCEPTIONS

Details of any exceptions taken to any part of these specifications shall be documented on a separate sheet to be attached to your submitted proposal. If no exceptions are taken, so state on said separate sheet.

DETAILED SPECIFICATIONS

GENERAL

1. The attached detailed specifications provided by Owner's Engineer supplement the description of construction units and are included as a part of the contract.
2. These specifications are considered correct; however, the successful Bidder will be required to provide a complete and workable scheme regardless of any omissions or discrepancies in these specifications at no additional cost to the Owner.
3. The Contractor shall correct promptly all errors in equipment discovered in the field at no cost to the Owner.
4. Any details not specifically covered shall be subject to the judgment of the Owner. In the event of conflicting requirements between the above standards and these Specifications, the terms of these Specifications shall apply.

INSPECTION

1. The Owner may appoint Inspectors whose duty it shall be to see the work, including tests of equipment, is done properly and in accordance with these specifications. Inspectors shall have full access to the work and shall have authority, subject to final decision of the Owner, to condemn and reject any defective work or material.



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Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Tanks

Sargent & Lundy^{LLC}

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CHARLES D. LAMB ENERGY CENTER
REQUEST FOR PROPOSAL
EXHIBIT A
TECHNICAL SPECIFICATION: C-4412

RAW/FIRE WATER AND DEMINERALIZED
WATER FIELD-FABRICATED TANKS

ISSUE: BIDS – REVISION 1
APRIL 15TH, 2013

Prepared By
Sargent & Lundy, L.L.C.
55 East Monroe Street
Chicago, Illinois 60603

Sargent & Lundy^{LLC}



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks

Sargent & Lundy LLC

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ISSUE SUMMARY, APPROVAL AND CERTIFICATION PAGE

RAW/FIRE WATER AND DEMINERALIZED WATER FIELD-FABRICATED TANKS

**FOR THE
 SIMPLE CYCLE PROJECT
 AT THE
 CHARLES D. LAMB ENERGY CENTER**

OKLAHOMA MUNICIPAL POWER AUTHORITY

This is to confirm that this Specification has been prepared, reviewed and approved in accordance with Sargent & Lundy's Standard Operating Procedure SOP-0407, Specifications, which is part of our Quality Management System.

<u>Rev.</u>	<u>Issue Purpose</u>	<u>Issue Date</u>	<u>Discipline</u>	<u>Prepared By</u>	<u>Reviewed By</u>	<u>Approved By</u>	<u>Areas</u>
0	Comments	03/12/13	Mechanical	J. Spence K. Friend	M. Leutloff	--	All
1	Bids	04/15/13	Mechanical	<u>K. Friend</u> K. Friend	<u>M. Leutloff</u> M. Leutloff	<u>K. Friend</u> K. Friend	All
2	Contract						



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks

Sargent & Lundy^{LLC}

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CERTIFICATION PAGE

**RAW/FIRE WATER AND DEMINERALIZED WATER FIELD-
 FABRICATED TANKS**

**FOR THE
 SIMPLE CYCLE PROJECT
 AT THE
 CHARLES D. LAMB ENERGY CENTER**

OKLAHOMA MUNICIPAL POWER AUTHORITY

Sargent & Lundy, L.L.C. is registered in the State of Oklahoma to practice engineering.
 The registration number is CA 2149 PE (expiration date: 6-30-2013).

I certify that the Mechanical Sections of this Specification were prepared by me or under my supervision and that I
 am a registered professional engineer under the laws of the State of Oklahoma.

Certified By: Katie Friend Date 4/15/2013
 Katie Friend, P.E.

Seal:





Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
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**RAW/FIRE WATER AND DEMINERALIZED WATER FIELD-
 FABRICATED TANKS
 FOR THE
 SIMPLE CYCLE PROJECT
 AT THE
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**TECHNICAL SPECIFICATION
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RAW/FIRE WATER AND DEMINERALIZED WATER FIELD-FABRICATED TANKS

PART 1 – SCOPE OF WORK AND PERFORMANCE REQUIREMENTS

101. GENERAL

- 101.1 Owner: Oklahoma Municipal Power Authority (OMPA)
- 101.2 Consulting Engineer: Sargent & Lundy L.L.C. (S&L)
- 101.3 Project Name: Charles D. Lamb Energy Center (CDLEC)
- 101.4 Project Location: The Southeast Quarter (SE/4) of Section 18, Township 27 North, Range 2 East, Kay County, Oklahoma.

102. DESCRIPTION OF THE PROJECT AND GENERAL BACKGROUND

- 102.1 OMPA is installing a combustion turbine simple cycle electric generating unit located outdoors with enclosures (the CDLEC Project). The combustion turbine is a Siemens SGT6-2000E, with a nominal generating capacity of 103MW (net) at design conditions. The combustion turbine generator (CT) will burn natural gas fuel only. The installation shall have provisions for future, combined cycle operation by the addition of a second CT and two (2) Heat Recovery Steam Generators (HRSGs) and one (1) Steam Turbine (ST). The location of the second CT is to the east of the first CT.
- 102.2 In general, this Specification covers technical requirements for the procurement of field-fabricated and erected tanks for the raw/fire water and demineralized water systems for the CDLEC Project.

103. INTENDED USE OF THE SPECIFIED EQUIPMENT

- 103.1 The raw/fire water and demineralized water tanks will be used to provide raw/fire water for plant fire protection and demineralized water for combustion turbine evaporative cooling and water wash. Owner is relying upon Seller's skill, judgment, and ability to furnish equipment and material that is suitable in performance and fit for such services.

104. TRANSPORTATION FACILITIES

- 104.1 Highway Access: Via OK-11 (Doolin Avenue)
- 104.2 Railway Access: None

105. BASE SCOPE OF WORK

- 105.1 Seller shall engineer, design, procure, manufacture, furnish, deliver F.O.B. freight prepaid to the CDLEC Project site, and erect the specified tanks.
- 105.2 The work shall include all necessary and/or usually supplied equipment and appurtenances for the safe, efficient, and convenient operation of the tanks within the scope of this Specification whether



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or not such items are specifically referred to in this Specification. The work shall include special tools required for erection.

- 105.3 The Seller shall provide, with the base bid, the specified mechanical equipment including, but not limited to, the following:
- a. Field-Fabricated Tanks for the following systems:
 - a1. One (1) tank for raw/fire water system
 - a2. One (1) tank for demineralized water system
 - b. Tanks shall be furnished complete with all necessary appurtenances to provide complete and fully functioning tanks. The scope of work shall include the following:
 - b1. Two (2) grounding pads for each tank located 180 degrees apart.
 - b2. Tank nozzles as specified herein. Final location of the specified nozzles shall be determined during the drawing review cycle with the successful Seller. Owner reserves the right to locate the nozzles in any location without additional costs during drawing review cycle. Vertical location of all pipe nozzles on side of tanks shall be installed and dimensioned from top of concrete.
 - b3. Suction nozzles shall be furnished with anti-vortex plates/covers.
 - b4. A minimum of one (1) personnel access opening and one air ventilation opening (e.g. handhole), where required for maintenance or cleaning access.
 - b5. Stairs and platforms as required for access and maintenance.
 - b6. Gaskets, nuts, and bolting required for hydro testing.
 - b7. Stiffeners, structural supports, wedges, leveling plates, and shims for leveling.
 - b8. Surface preparation including prime coats (internal and external).
 - b9. Unloading, storage, and erection of all materials and equipment at the project site including crane service.
 - b10. Leak testing and hydro. Transport of hydro water to/from construction site.
 - b11. Vents and vent screens.
 - b12. Provide all nozzle closure (flanges, gaskets, bolting, caps, etc.) for tank hydrotesting
 - b13. Special tools required for installation, operation, and maintenance.
 - b14. Consumables normally required for installation, commissioning, and startup of field-erected tanks.
 - b15. Shipping and Freight F.O.B. job site for all material.
 - c. Shell materials recommended by the Seller shall be compatible with the fluid being handled.
 - d. Owner will provide power for trailers, in addition to potable water, sanitary facilities and dumpsters for construction waste. Construction power shall be provided by Seller. No landline



and phone lines available. All field support items such as trailers, office space, phones, etc. by Seller. See Attachment 8 for details on Construction Facilities and Temporary Controls.

- e. All equipment shall be designed for an expected service life of 30 years.
- f. Seller shall provide documentation and data to the Owner, including but not limited to the following:
 - f1. QA/QC Program
 - f2. Drawings, including as-built drawings, and Product Data as specified in Article 205.
 - f3. Schedules and monthly updates
- g. Seller shall provide field services as follows:
 - g1. Installation Engineers (Identify number of man-days in proposal)
 - g2. Startup Engineers (Identify number of man-days in proposal)
 - g3. Supervision during field performance testing (Identify number of man-days in proposal)
 - g4. Technical Field Assistance as specified in Article 109.
 - g5. The Seller shall provide all services which are required for the supply of the specified equipment, as well as, but not limited to the services as specified in this specification. Included in these services is shipment to the job site.
- 105.4 Seller shall perform all off-site work indicated in the Specification and which is normally considered a part of the type of work called for by this Specification, whether or not such work is fully described or detailed. All items not specifically mentioned in the specification but that are needed to make a complete working package shall be included.
- 106. **OPTIONAL SCOPE OF WORK**
- 106.1 Option 1: Seller may provide optional prices for staircases instead of ladders with cages.
- 107. **WORK BY OTHERS**
- 107.1 Foundation design and installation.
- 107.2 Furnishing and installation of the tank anchor bolts.
- 107.3 The Owner (through separate contracts) will furnish all labor, supervision, materials and equipment necessary for unloading, storing, installing, erecting, and commissioning of the:
 - a. Furnishing and installation of all required permanent stair or ladder lighting systems.
 - b. Design, furnishing, and installation of external wiring, wiring ground pads, and station grounding system below grade.
 - c. Flange gaskets, nuts, and bolts required for external pipe connections.
 - d. Tank instrumentation.



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- e. Relief Valves.
 - f. Lighting Rods.
 - g. Craft parking on power plant site.
 - h. Overflow piping.
 - i. Any necessary building permits or design approvals required by government or local authorities.
 - j. Access roads to, and completely around the tank foundation area, suitable for loaded heavy trucks to negotiate under their own power.
 - k. Laydown areas for material storage.
 - l. Final level grading of the area adjacent to the tank foundation for tank erection, thus permitting the safe use of lifting equipment.
 - m. Any fencing, lighting, or security arrangements that may be required.
 - n. Any and all security clearances, gate passes, or other requirements for entry of men, materials, and equipment onto the site.
 - o. Potable water and utility water at the site suitable for drinking.
 - p. The Owner will provide 120/208 volt, single-phase service and 480 volt, three-phase service at a location in the vicinity of the work.
 - q. Any valve accessories and all piping beyond the first external flange of the tank nozzles, including gaskets and bolting.
 - r. Any cost of third party inspection of independent inspection agency that may be required.
 - s. Any required washing down of inside surfaces after hydrostatic testing.
 - t. Owner shall locate the center of each tank.
 - u. Toilet/sanitary facilities.
 - v. Water, of suitable quality and temperature, for hydrotesting.
 - w. Onsite disposal site for hydrotest water.
 - x. Tank grouting.
 - y. See Attachment 8 for additional details on Construction Facilities and Temporary Controls.
108. TERMINAL POINTS:
- 108.1 The Field-Fabricated Tanks and appurtenance interface points listed in Table-A below are provided to define interface locations and connection parameters with equipment supplied by others. Lack of reference to a specific terminal point does not relieve Seller from providing the required interface for all such terminal points. Seller shall provide interfacing design information at each terminal point.



**TABLE 1-1
 TERMINAL POINTS**

<u>Item/Description</u>	<u>Seller's Supply</u>	<u>Supply by Others</u>
Piping	Any non-process piping in the Seller's tank or appurtenances.	All process piping to and from the Seller's tank nozzles. Mounting of piping to and from the Seller's valve tank nozzles.
Electrical Components and Wiring	All electrical components and wiring on the tank assembly or Seller supplied appurtenances.	Wiring necessary to provide power to tank assembly and Seller supplied appurtenances.
Instrumentation and Control	Instrumentation called for in Specification and all appurtenances necessary for proper operation	Connection to Owner's Plant Information and Control System (PICS).
Mounting	Mounting recommendations and limitations.	All foundations and mounting of tank assemblies.

108.2 Refer to Attachment 2 for Tank Connection details.

108.3 Additional terminal points of Seller's equipment scope of supply are listed below.

- a1. Grounding lugs
- a2. Seller shall coordinate deliveries, identify laydown requirements and furnish field personnel, as required to support erection by the general work contractor.

109. TECHNICAL FIELD ASSISTANCE

109.1 Seller shall provide the services of competent technical personnel to instruct, advise, and train Owner's personnel in the correct startup, safe operation, maintenance, testing and placing of the equipment in successful service.

109.2 Seller shall arrange for its sub-suppliers' representatives to provide field services, as necessary, to ensure all of the requirements of this Specification are met.

109.3 Seller shall furnish necessary office equipment required by Seller's field personnel at the Project site. Owner will furnish indoor office space and the necessary storage facilities required for special erection tools and instruments, only for such purposes.

109.4 The Seller's technical personnel shall cooperate with the Owner's erection contractors. Field personnel shall be capable, qualified and able to perform the duties required to the satisfaction of the Owner and shall be vested with authority to make decisions binding on Seller.

109.5 After all instruments and controls required for operation of the equipment are installed and ready to operate, a Seller's service representative shall inspect them, approve the installation and give assurance in writing to Owner that the instruments are properly installed, ready for service and are correct within the limits of the warranty.



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109.6 Seller shall provide necessary technical services as required to resolve preliminary operating problems as they develop until satisfactory operation is achieved. Field technical services for manufacturing errors shall be paid for by Seller.

110. HAZARDOUS MATERIALS

110.1 As required under Federal Hazardous Communications Standards and certain state and local laws, the Seller shall provide Material Safety Data Sheets covering all hazardous materials furnished under or otherwise associated with the work under this Contract. The Seller shall provide the Owner with either copies of the applicable Material Safety Data Sheets or copies of a document certifying that no Material Safety Data Sheets are required under any federal, state, or local law, regulation, statute or ordinance in effect at the jobsite. Seller shall identify those hazardous materials that remain on the jobsite at the end of the Project.

110.2 The supply or furnishing of materials and/or products containing asbestos or ceramic fiber is prohibited for any application.

111. CONFLICTS

Seller's equipment shall be designed for and shall meet the service, performance and minimum level of quality requirements specified. Seller shall be solely responsible for advising the Owner and the Engineer, in writing, of any conflicts between the Specification and the Seller's design, including performance and levels of quality.

112. OWNER AND ENGINEER

Where this Specification requires the Seller to submit documents for review to the Owner, Engineer or Owner and/or Engineer, it is understood that either the Owner, Engineer or both may perform the review.

113. PRODUCT SUBSTITUTION

113.1 Product Substitutions:

- a. Mention of materials or components by name as products of certain Suppliers in this Specification is done to ensure that the proper quality and/or type are provided.

If the Seller opts to use equipment other than that specified, the Seller shall identify, in writing, the proposed substitution to the Engineer for review and approval. Within the Seller's request, supporting documentation shall be provided identifying why the substituted equipment is acceptable based on the Specification requirements and what advantages it provides or why the specified equipment is not suitable for the application.

Seller must supply at its expense any information and/or test requested by the Owner and/or Engineer to determine acceptability of the substitute. Any purchase of proposed substitute products by the Seller prior to acceptance by the Owner and/or Engineer will be at the Seller's own risk.

114. SCHEDULE

114.1 General:

- a. Seller shall submit a detailed schedule for the Work as follows:



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- a1. Engineering Drawings – generally 4 weeks after award
- a2. Material, equipment and subcontractor procurement, fabrication and delivery schedule – generally 8 weeks after award
- b. A project schedule (“Master Project Schedule”) will be created by the Engineer to track progress of engineering (including drawing review), fabrication and delivery.
- c. Seller’s schedule shall be provided in Primavera or Microsoft Project software. While the Seller’s schedule will be maintained independently, it will be combined with all segments of the Master Project Schedule for overall Project reporting.
- d. The Owner and Engineer will review the Seller’s schedule, which will be used to coordinate the Work thereafter throughout the length of the project. The schedule will be incorporated into the Master Project Schedule that will include all activities of other manufacturers, sub-contractors and other parties working on the Project.
- e. Seller shall update the schedule on a frequency as directed by the Owner to track actual progress against the established target schedule.

114.2 Schedule Requirements:

- a. Seller’s design, manufacturing and delivery schedule shall be such that the erection work can be carried out in accordance with Table 1-2:

**TABLE 1-2
 SCHEDULE**

Activity	Unit 1
Raw/Fire Water & Demin. Water Tanks - Bids Due	May 13, 2013
Raw/Fire Water & Demin. Water Tanks - Contract Award	June 13, 2013
Submit Detailed Schedule	Two Weeks After Award
Drawings and Data - Submit for Approval	See Article 206, Table 2-2
Delivery of all Equipment – Raw/Fire Water & Demin Water Tanks	June 19, 2014
Complete Tank Erection, Prep, and Prime of Tank Surfaces – Raw/Fire Water & Demin Water Tanks	Dec. 18, 2014

- b. It shall be the Seller’s responsibility to maintain the progress of its Work in accordance with the schedule.
- c. The Master Project Schedule will be revised and updated as the Work progresses. It shall be the responsibility of the Seller to provide progress reports monthly with information relating to actual fabrication and delivery progress, as well as an update of Seller's master document list.

115. DESIGN INPUT

115.1 Site Conditions:

- a1. Temperature and humidity:



**TABLE 1-3
 SITE DESIGN TEMPERATURE AND HUMIDITY**

Ambient Air	Winter Design	Guarantee	Summer Design
Dry bulb temp °F	3°F	59°F	105°F
Relative humidity, %	95%	60%	40%

a2. Site elevation, above mean sea level Approx. 1,078 ft NAVD 88

116. FOUNDATION LOAD CONDITIONS

116.1 Wind Loads for all structures including any required acoustic enclosures shall be computed using IBC 2006. A step function pressure with height shall be used. The following parameters shall be used in computing and applying wind loads:

**TABLE 1-4
 WIND LOAD DESIGN INPUT**

Basic Wind Speed (V) (3 second gust)	90 miles per hour
Occupancy Category	III
Exposure Category	C
Importance Factor	1.15

116.2 Seismic:

**TABLE 1-5
 SEISMIC LOAD DESIGN INPUT**

Code: International Building Code (IBC) 2006	
Occupancy Category	III
Site Classification (soil)	D
One Second Spectral Response Acceleration (S ₁), g	0.056
Short-Term (0.25 sec) Spectral Response Acceleration (S _s), g	0.148
One Second Spectral Response Acceleration (5% damping) (S _{D1})	0.09
Short Term (0.2 sec) Spectral Response Acceleration (5% damping) (S _{DS})	0.158
Importance Factor	1.25

116.3 Foundation Requirements:

a. The Seller will furnish to the Owner all the engineering data required to design the foundations for the equipment furnished under this specification. The foundation requirement will clearly indicate all loads/reactions and will include the following data:



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- b. Loads to be transferred to equipment foundations, including load reactions defined relative to equipment centerlines. Loads to include all operating conditions including conditions such as fault conditions, etc.
 - c. Anchorage details indicating the anchor diameter, material, projection, and any special features.
 - d. Foundation stiffness requirements and any relative displacement limits between machine support points.
 - e. Operating temperature requirements at the base of equipment.
 - f. Foundation plate levelness requirement.
 - g. Recommended grout thickness, type, foundation and steel preparation.
 - h. Jack screws and/or other leveling provisions.
- 116.4 The Seller's compliance with the structural requirements will be documented in the form of a design report, calculation, test report and/or drawings, as appropriate. This documentation will include a complete description of the analysis method used in the structural design.

END OF SECTION



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PART 2 – QA, DOCUMENTATION AND DATA SUBMITTAL

201. QUALITY ASSURANCE

- 201.1 Seller shall have a QA Program in effect at all times to verify that all items and services, including subcontracted items and services, comply with the requirements of the Purchase Order and its attachments.
- 201.2 This Program shall clearly establish the authority and responsibility of those responsible for the QA Program. Persons performing quality functions shall have sufficient and well-defined responsibility and authority to enforce quality requirements; to identify, initiate, recommend, and provide solutions to quality problems; and to verify the effectiveness of the solutions.
- 201.3 When requested, Seller shall submit a controlled copy of their QA or Quality Systems Manual for review and acceptance by Owner. When requested by Owner, Seller shall submit copies of any associated implementing procedures and/or instructions. In addition a pre-inspection meeting will be held to discuss purchase order requirements.
- a1. If subsequent to its acceptance, the QA Program is found to be ineffective or inadequate in providing acceptable quality control, Owner reserves the right to require the necessary revisions.
 - b. Seller's Responsibilities for Suppliers
 - b1. Seller shall identify, in purchase documents to their suppliers, all applicable quality and QA requirements imposed by the specification on Seller and shall ensure compliance thereto. Seller has the prime responsibility for vendor surveillance and evaluating and monitoring the implementation of the Quality Assurance Programs of their sub-suppliers. Seller shall submit a copy of their Vendor Surveillance plans to Owner for review prior to implementation. Upon request, Seller shall submit to Owner copies of the reports of the vendor surveillance activities that Seller performs on their suppliers.
 - c. Witness Points
 - c1. Owner shall propose a witness point inspection program no later than 90 days after manufacturing award. Owner and Seller shall establish mutually acceptable witness points for which Seller shall give 10 business days prior notification of upcoming witness points.
 - c2. Witness points are defined as predetermined points during fabrication when equipment or activities may be inspected or witnessed for compliance with the Purchase Order, specification, and quality requirements.
 - c3. The Owner shall have the right to access the Sellers and sub-vendors facilities during normal business hours to verify the progress and quality of the work.
- 201.4 Deviations and Non-Conformances
- a. Any departure from any requirement of this specification is considered a deviation or non-conformance. Examples include physical defects in equipment, test failures, equipment out-of-



tolerance, or deviations from specification, inspection or test procedures. No deviation or non-conformance from this specification shall be accepted until approved in writing by Owner. Such approval shall not be unreasonably withheld.

202. SHOP TESTING

202.1 General

- a. The Seller or Seller's subcontractors at their shops prior to shipment shall test the auxiliary equipment furnished under this specification (if applicable). Factory test and inspections shall demonstrate the quality, accuracy, workmanship, balance, clearances and similar characteristics. Seller shall furnish reports showing the results of all such tests for Owner's information. The content and format of these test reports will be mutually agreed to by the Seller and Owner during project execution. Owner reserves the right to witness factory testing.

203. MANUFACTURING SCHEDULE

203.1 Seller shall prepare and submit to the Owner, within three (3) weeks after manufacturing award, a CPM schedule to accomplish the entire WORK. The schedule shall include a separate entry for each item of the WORK and shall indicate tasks that are on the critical path.

203.2 Owner will review the schedule and it will be used to coordinate the WORK throughout the duration of the overall project. The schedule will be incorporated into a project construction schedule, which will include all activities of other manufacturers and other parties concerned with the WORK on this project.

203.3 The schedule shall be revised, updated and submitted to the Owner by the 5th day of each month until the completion of the WORK.

204. SELLER'S MASTER DOCUMENT LIST AND SUBMITTAL SCHEDULE

204.1 Within four (4) weeks after notification of engineering award, Seller shall provide the Owner with the finalized Master Document List (MDL). The MDL shall contain all drawings, documents, lists and official documentation relating to the WORK of this specification. The MDL shall be updated and resubmitted to the Owner by the 5th day of each month for the duration of the WORK and/or until all items on the list have been issued final or as-built status. The MDL shall contain the following information:

204.2 Owner's name, station name, unit number, this specification number, purchase order and supplier's order number.

204.3 Document identification numbers and titles.

204.4 Scheduled dates when completed and checked documents will be first submitted to the Owner for review.

204.5 Actual dates when completed and checked drawings were first submitted to Owner for review.

204.6 Scheduled dates when drawings will be released for fabrication.



- 204.7 Actual dates when drawings were released for fabrication.
- 204.8 Percentage of completion of all documents on each update of the list.
- 204.9 The project schedule requires that drawings and data be submitted in an expeditious manner. Delivery date shall be receipt of final drawings. Changes to drawings after these dates will be charged to the Sellers account. Weeks shall be defined as 7 calendar days including weekends and holidays. A summary of the drawing and data submittals is included in Section 207.
- 204.10 As-built drawings and records of final control settings shall be furnished within 30 calendar days of successful completion and acceptance of the performance tests.
205. SELLER'S DRAWINGS AND DATA
- 205.1 The required engineering and design shall begin immediately after Release for Engineering, regardless of the shipping date, and shall proceed in an expeditious and orderly manner until complete. Drawings submitted in accordance with the MDL shall be suitable for use in balance of plant design. Seller shall submit drawings and data as hereinafter listed to the Owner for review.
- a. Drawings shall be Project specific and marked or stamped as such. Any non-specific references on drawings shall be removed from the drawings.
 - b. Dimensions and loads on drawings and data submittals shall be as follows:
 - b1. All dimensions shall be U.S. Customary, in feet, inches, and fractional inches (1/2, 1/4, 1/8, 1/16, 1/32). No other fractions are allowed.
 - b2. All loads shall be in kips and pounds (lbs.).
 - c. Drawings
 - c1. General arrangement drawings shall consist of a composite outline layout of all major equipment including auxiliary equipment. General arrangement drawings shall show all basic dimensions, clearances, tolerances, and required clearances for access and maintenance, including door swings, etc.
 - c2. Procedures to be used on the work for welding, nondestructive examinations, hydrostatic testing, and cleaning are to be submitted to the Consulting Engineers for review prior to start of work.
 - c3. Chemical and physical reports, radiography film, results of all nondestructive examinations, and hydrostatic testing shall be submitted to Consulting Engineers for review.
- 205.2 Owner's Mechanical connection points. The mechanical points shall include the following minimum information:
- a. Identifier
 - b. Reference drawings showing interface
 - c. Connection type, size, material, thickness, class



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- d. Fluid/service description
 - e. Normal and design conditions
 - f. Allowable forces and movements
 - g. Arrangement and dimension drawings for all equipment and piping systems, including platform access requirements.
 - h. Drawings showing special requirements for rigging and tooling.
 - i. Clearance and alignment drawings.
 - j. Bills of Material for all electrical equipment and electrical drawings showing schematic and wiring diagrams.
 - k. Thermal insulation, lagging and lagging anchorage.
 - l. Foundation and embedment requirements. Anchor bolt information shall include location of bolts in relation to tank centerline, anchor bolt projection above concrete surface, bolt material strength, and required thread length. Leveling provisions shall be fully described.
 - m. Installation drawings for instruments furnished by Seller for field installation by Owner.
- 205.3 Lists
- a. Drawing List
 - b. Design Criteria
 - b1. Design criteria to be used for the static and dynamic analysis and design of the foundation(s) shall include final loads and load orientation with details for all equipment, and any deflection, stiffness or sensitivity criteria that may apply. All loads from different sources shall be listed separately (e.g. dead load, live load, wind load, seismic load, etc.)
- 205.4 Procedures
- a. Procedure for grouting of soleplates, sub-soleplates, etc.
 - b. Cleaning, checking and testing procedures.
- 205.5 Test Reports
- a. Material Test Report shall be submitted for Buyer's review.
- 205.6 Miscellaneous Data
- a. Seller shall furnish instrument manufacturer, name, model number, calibration, configuration data and set point data for all instruments and control devices furnished by Seller.



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- b. Equipment lay-down and pull space area requirement with component weights and overall dimensions which will be required for erection of the field erected tanks.
- 205.7 Drawing Submittal
- a. The project will be utilizing Sharepoint, a collaborative project Web site. In lieu of submitting hardcopy transmittals, Seller shall post all official transmittals of correspondence, data, drawings, documents, etc. to the project web site. Unless specifically requested, Seller shall not submit hardcopy documents. Owner and Engineer will post comments on Seller's transmittals via the web site. Seller, Owner and Engineer will coordinate the specific details after Award.
- b. Electronic copies of drawings shall be in Microstation, AutoCAD, or PDF format. All Microstation drawings shall be merged with appropriate background files before submittal.
- c. All transmittals shall include a unique transmittal number and clearly indicate the Owner's name, Engineer's project number, how they are being sent, and the reason for the submittal. The transmittal should include a clear, concise description of all documents enclosed. Documentation by drawing number, revision number, and date should be indicated, if applicable. Separate transmittals shall be provided for each discipline (General, Structural, Mechanical, Electrical, and I&C). Drawings or documents that are sent only for information shall have its own transmittal separate from drawings sent for review.
- d. If general type documents are submitted for review, which include devices that Seller does not intend to supply on this contract, Seller shall certify on the documents that devices are not being supplied.
- e. Where alternatives are shown, the alternative being furnished shall be easily identifiable on that document.
- f. A document being transmitted for review for the first time shall so state on the transmittal sheet or letter accompanying the document.
- g. On the transmittal letter, the Seller shall advise the Engineer of the date comments are required by to maintain the engineering and shipping schedules.
- h. Drawings and documents shall be clearly labeled with:
- h1. Owner's name
 - h2. Station / Unit
 - h3. Equipment number
 - h4. Service
 - h5. Contract number / Specification number
 - h6. Seller's order number
 - h7. Drawing number and title
 - h8. Issue / revision number
 - h9. Issue / revision date



205.8 Document List

- a. Within four weeks after notification of award Seller shall provide the Engineer with a complete document list. This list shall be updated and resubmitted on a monthly basis for the duration of the work and/or until all drawings have been completed, and shall contain the following information in a format similar to Table 2-1:
 - a1. Document numbers and titles
 - a2. Package number, defined by Engineer after Award
 - a3. Scheduled dates when completed and checked documents will be first submitted to the Owner for review
 - a4. Actual dates when completed and checked documents were first submitted to Owner for review
 - a5. Percentage of completion of all documents on each update of the document list

**TABLE 2-1
 SAMPLE DOCUMENT LIST**

Doc. No.	Document	Package No.	First Review Submittal (Scheduled)	First Review Submittal (Actual)	Percent Complete
1	General Arrangement				
2	Foundation Design Criteria				
3	Mill Test Reports				

205.9 Review Procedure

- a. Drawings that are reviewed by the Owner will be returned to Seller via Sharepoint. All comments and questions must be resolved before a re-submittal of the drawings will be processed. If the design has not developed enough to resolve some of the comments or questions, Seller shall place a “hold” on those items or areas of design. Owner reserves the right to return drawings unprocessed to Seller if there is any evidence that Seller has not acknowledged all comments and questions.
- b. Documents or portions thereof, submitted for review will be reproduced and distributed to meet the project requirements. This includes documents with proprietary statements, unless Seller advises in writing that the documents are not to be reproduced.
- c. On the transmittal letter, the Seller shall advise the Engineer of the date comments are required by to maintain the engineering and shipping schedules. A minimum of 4 weeks shall be allowed on all comment cycles.
- d. Identification of changes on all documents from previous issue must be clearly shown on each document by scoping/”clouding” all revisions from the previous issue. Submittals without revisions annotated will be rejected and returned to Seller unprocessed.



- e. Shop test data and performance curves shall be submitted for review before shipment.
- f. Engineer will stamp each drawing with one of the following status codes which instruct the Seller how to proceed with fabrication:
 - f1. Status 1: No exception taken. Manufacturer may proceed with fabrication or construction in accordance with specification.
 - f2. Status 2: Manufacturing may proceed with fabrication in accordance with specification based on making revisions as noted and resubmit.
 - f3. Status 3: Revise as noted and resubmit. Hold fabrication.
 - f4. Status 4: For information only, review not required.
- g. Seller is responsible in obtaining the Engineer’s “Status 1” on those documents covering an item at least two weeks before that item is to be shipped. Seller shall be liable for the costs of any field changes resulting from failure to adhere to this requirement.
- h. Seller shall resubmit documents stamped “Status 2” or “Status 3” within 4 weeks after documents has been posted on Sharepoint.
- i. Documents shall not be submitted for Owner’s record until they are acceptable to the Engineer without comment.

206. INSTRUCTION BOOKS
 Not Applicable

207. SUMMARY OF DRAWING AND DATA SUBMITTALS

207.1 The following table summarizes the minimum submittals required for this specification.

Due Date Description

- AA - After Award
- AD - At Delivery to project site
- AT - After Testing
- BD - Before Delivery to Project Site

**TABLE 2-2
 DOCUMENT SUBMITTAL TABLE**

Submittal Item	Due Date
Erection procedures/manuals	15 weeks AA
Bidder Experience List	W/Proposal
QA Manual	When requested by Owner
Vendor Surveillance Plans Surveillance Reports	Prior to implementation, when requested



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Submittal Item	Due Date
CPM schedule	W/proposal, 4 weeks AA, and once per month
Master Document List (MDL) and Submittal Schedule	4 weeks AA and once per month
General arrangement drawings with Mechanical Interface Connection Points Located	W/proposal and 4 weeks AA
Foundation and embedment arrangement	W/proposal and 4 weeks AA
Foundation Design criteria including loads (Not-to-Exceed Loads)	W/Proposal and 4 weeks AA
Procedure for grouting of soleplates, sub-soleplates, etc.	8 weeks AA
Cleaning, checking and testing procedures	N/A
Mill test reports	LATER
Equipment laydown area	W/Proposal and 10 weeks AA
Paint manufacturers name & catalog numbers	12 weeks AA
Outdoor storage procedures	12 weeks BD
Describe where Specification deviates from Seller's standard package	W/proposal
Identification of coated components and coating materials	W/proposal

208. FINAL RECORD DRAWINGS, DOCUMENTS AND DATA
- 208.1 Seller shall submit final as-fabricated record drawings, documents and data, including subcontractor documents, within two (2) weeks prior to shipment of equipment, or as directed by Owner.
- 208.2 At the completion of the project, Seller shall submit a complete set of all final (as-built) Seller and Subcontractor drawings, including any changes through performance testing.
- 208.3 Seller's final record submittals shall be in Microsoft Word, Microsoft Excel, MicroStation, or AutoCAD file formats. Drawing files shall be submitted electronically on compact disk (CD) or Digital Versatile Disc (DVD) with the project name, station name, station unit number, drawing numbers and revision numbers identified on the disk labels together with one full size print of each drawing.

END OF SECTION



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PART 3 – GENERAL REQUIREMENTS

301. CODES AND STANDARDS

- 301.1 The latest edition and addenda of the publications listed in effect on the date of Contract Award are part of the Specification and, referred to by title or basic designation and, are applicable as indicated by the specific reference.
- 301.2 For materials, products or means of fabrication where no specific reference to codes or standards are listed, the following codes and standards shall apply.
- 301.3 The specifications, codes and standards referenced in these specifications (including addenda, amendments, and errata) shall govern in all cases where references thereto are made except where they conflict with these specifications. In case of conflict between the referenced specifications, codes, or standards and these specifications, the latter shall govern to the extent of such difference.
- 301.4 Foreign codes and standards shall not be used without written consent of the Owner.

**TABLE 3-1
 SPECIFICATIONS, CODES AND STANDARDS**

Reference	Name
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
IBC	International Building Code 2006
IFC	International Fire Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Act
SSPC	The Society of Protective Coatings

- a. Seller shall comply with all local codes, standards, recommendations, and amendments, including the requirements of the Oklahoma State Fire Marshal.
302. NAMEPLATES AND TAGS
- 302.1 Introduction
 - a. Seller shall provide nameplates and tags for all equipment as described below.
 - b. Seller shall number all equipment and components using Owner's numbering system.
 - c. Owner's identification numbering system is provided to consistently number equipment and components throughout the generating plant.
 - d. Identification numbers shall be consistent with the numbering on drawings, lists, indexes, data sheets, manuals and electronic files.
 - 302.2 Requirements



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- a. Nameplates and tags shall be provided for all equipment, control and instrumentation equipment, mechanical devices, specialty components and other items of similar nature supplied with a unique identification number and in accordance with the following guidelines.
- b. The nameplates and tags shall be manufactured of stainless steel or laminated phenolic material with black lettering on white background. Seller shall engrave the identification information on the nameplates or tags and permanently affix them to the device.
- c. Nameplates or tags shall be stamped, as a minimum, with the manufacturer's name, manufacturer's project number, the Purchase Order number under which the item was purchased, the equipment identification number using the Owner's identification number to identify that piece of equipment on Seller's drawings and the item's serial number.
- d. Nameplates shall be permanently attached to the tank using manufacturer's standard methods.

303. PRODUCT DELIVERY REQUIREMENTS

303.1 Pre-assembly of Equipment

- a. Offsite Pre-Assembly: To the maximum extent practical, Seller shall pre-assemble all components and equipment off site within the shipping limitations of the generating station.

303.2 Packaging and Shipping

- a. Seller shall adequately prepare all of the equipment for shipment. Where required by the equipment, Seller shall furnish and install covers to protect the equipment from rain, hail, wind, dust, etc. Equipment shall be adequately sealed and protected during shipment to prevent corrosion, entrance of foreign matter and possible damage from rough handling during transit. Any articles or materials that might otherwise be lost in shipping shall be boxed or wired in bundles and plainly identified as described hereinafter.
- b. Items that are either too heavy or too bulky to be handled by one person shall preferably be fastened to a pallet or be packaged in a manner that is suitable for handling with a forklift truck. Where it is not feasible to handle an item with a forklift truck, parts shall be prepared so that slings for handling may be attached readily while the parts are on the transporting vehicle. Where it is unsafe to attach slings to the box, the boxed parts shall be packed with slings attached directly to the part and the sling shall project through the box or crate so that attachment can be made readily.
- c. When a shipment is to be made, Seller shall notify the Owner giving a description of the articles shipped, the packing list and any other information necessary for identification. Seller shall also provide instructions for assembly and storage of equipment or instruments that should be stored inside or that require special attention or maintenance prior to installation and for the period of time between completion of installation and the time that the equipment is placed in service. The shipping weight and dimensions of each article shall also be given, as well as any information related to unloading or handling equipment or materials, such as pickup points, spreader bar requirements.
- d. Seller shall provide notification to the Owner at least 15 days in advance of the expected shipping date. At that time, the Owner will advise the Seller of acceptable delivery hours.
- e. All equipment and separately shipped items shall be clearly identified with a securely fastened, weatherproof tag. All shipping containers, packing lists, bills of material, correspondence, etc., shall also be identified with identical information. Boxes, shipping containers, crates, etc., shall



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installation and any onsite requirements of the equipment shall be coordinated with the Owner's site project manager.

303.4 Unloading, Storage and Protection

- a. Owner will designate a laydown area for material deliveries based on Seller's requirements. Seller shall unload, store and protect all materials delivered.
- b. Protective Coatings and Preservatives:
 - b1. Preservative coatings used on components shall be suitable for the conditions normally expected during shipping, storage and throughout the erection period.
 - b2. Each type of preservative used shall be identified as to quality, life expectancy and type. Toxic and hazardous type preservatives shall not be used. Complete information shall be submitted to the Engineers covering step-by-step procedures, including federal, state and local governing controls for handling and removal of each type of preservative. This information shall be submitted six (6) months prior to delivery.

304. OPERATION AND MAINTENANCE MANUALS

Not Applicable

305. SPARE PARTS AND SPECIAL TOOLS

305.1 Not Applicable

306. TRAINING

306.1 Not Applicable

END OF SECTION



PART 4 – MECHANICAL REQUIREMENTS

401. FIELD-FABRICATED TANK MECHANICAL REQUIREMENTS

401.1 General:

- a. The field-fabricated tanks shall be used to store the following fluids for the Simple Cycle Plant:
 - a1. Demineralized Water Storage Tank: Demineralized Water (See Attachment 4)
 - a2. Raw/Fire Water Storage Tank: Ponca City Water (See Attachment 3)
- b. All parts shall be easily accessible for maintenance and/or adjustment. All piping connections shall be arranged so as not to interfere with normal maintenance.
- c. Water tank construction per AWWA Code D100: Welded, Steel Tanks for Water Storage
- d. The water storage tanks shall be vertical, cylindrical, welded joint, crowned bottom (with a slope of 1 inch in 12 feet), fixed conical roof, above ground, atmospheric storage tanks in accordance with AWWA Code D100. Carbon steel in accordance with API-620.
- e. The tanks shall be designed for a minimum of 30-year life.
- f. One spare set of permanent gaskets for all manhole covers shall be furnished and labeled as such for each tank
- g. Certified mill test reports, covering all steel plates and structural shapes to be used in the work, shall be furnished as evidence that such materials are new and in compliance with the governing specifications.
- h. Tanks shall be furnished complete with all required nozzles, vents, drains, and flanges; manholes and access openings with covers, gaskets and bolting; ladders; platforms; handrailing; inside piping with suitable supports, if required; and such braces, brackets, legs, etc., as required, including all other appurtenances shown on the standard drawings or called for in this Section. Gaskets shall be 1/8 inch thick, full faced, and shall be compatible with the fluid in the tank.
- i. Tanks shall be self-supporting between supports.
- j. Seller to advise if specified tanks are to be anchored to the tank foundation.
- k. Tanks shall be all-welded construction and the wetted surfaces shall be designed to withstand an internal pressure equal to a column of liquid 10 feet higher than the liquid level in the tank when filled.
- l. Fixed tank roofs shall be self-supporting, with no internal support framing or bracing. The internal seam between the roof and wall shall be seal welded. In the event a gap cannot be eliminated, the structural member and plates must be attached by a seal weld. Caulking will not be allowed.

401.2 Design

- a. All tanks shall be designed for usable working capacity as per Attachment 6. Any footprint restrictions are also listed in Attachment 6. Seller to furnish the top capacity level (TCL) and bottom capacity level (BCL) from tank bottom as per proposal data sheet.



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- b. The tanks shall be furnished complete with all required process vents, vent screens, overflows, drain connections, and features as specified herein for startup, operation, and maintenance.
 - c. Proposals shall be based on each tank being supplied with the openings and connections in Attachment 2. The Consulting Engineer will not prepare a nozzle location drawing. The successful Seller will submit the general arrangement drawings with the required number of nozzles shown based on their experience. The size and location of the connections will be finalized by the Consulting Engineer when these tank drawings are submitted for review. Vertical location of all pipe nozzles on sides of tanks shall be shown on Seller's drawings as dimensioned from top of the tank bottom plate.
 - d. Each tank suction shall be furnished with an anti-vortex device for tank pump suction nozzle(s).
 - e. All piping connections shall extend a minimum of 6 inches from the outer surface of the tank.
 - f. Tank Ground: A minimum of two electrical grounding pads at a maximum of 180° apart shall be mounted on each tank for connection to the ground grid. Grounding pads shall be sized and fabricated to accept at a minimum a #4/0 copper cable welded to it. Grounding pads shall also have tapped holes suitable for attaching to two-hole NEMA grounding lugs. Grounding pads shall be located when Seller's tank drawings are submitted for review.
 - g. Air venting capacity of the Tank shall be equal to or exceed the inflow capacity, outflow capacity or overflow capacity.
 - h. Water tank plate design thickness shall be determined by AWWA, D100. Design will not include a corrosion allowance for tank sides and top. A 1/16" corrosion allowance shall be included for the tank bottom. Materials shall be compatible with the fluid being stored.
 - i. Supplier shall perform all the calculations necessary to ensure the integrity of each tank, and the design shall be checked carefully to provide the proper plate thickness, reinforcement, and supports as required for the service. Calculations shall be in sufficient detail to permit independent checking.
 - j. Tank shall include a mechanical gauge to indicate level for redundancy in design and measurement of tank level.
- 401.3 Nozzles and Pipe:
- a. All internal or external piping and all tank nozzles and nozzle flanges (where required) and all manholes shall be of the same base material as the tank shell, unless otherwise specified in this Section.
 - b. Nozzles and pipe for carbon steel and aluminum tanks shall be as follows, except where conditions require heavier wall thickness:
 - b1. Sizes 2 inch NPS and smaller: Schedule 80
 - b2. Sizes 2-1/2 inch to 10 inch NPS inclusive: Schedule 40
 - b3. Sizes 12 inch and larger: 3/8 inch wall
 - c. Flanges, where shown for flanged nozzle terminals, shall conform in dimensions and drilling to ASME B16.5 for Class 150 flanges. Flanges shall be of the welding neck or slip-on type.



Aluminum flanges shall be flat face. Boltholes shall straddle the tank centerline, and the contact faces shall be exactly perpendicular to the pipe axis.

d. Weld-end nozzle terminals for carbon steel tanks shall be as follows:

d1. Sizes 2 inch NPS and smaller: Socket-weld end.

d2. Sizes 2-1/2 inch NPS and larger:

d2.1 Carbon steel: Per Sargent & Lundy Standards MSDE-2.1.8.5 (Attachment 7).

d3. Owner's connecting pipe wall thickness will be per Subsections 401.3b. If the tank nozzle has an extra strong or heavier wall, Seller shall grind the welding end land of the nozzle to match Owner's connecting pipe. Tapering of the nozzle from the welding end land to the nozzle ID shall be in accordance with ASME B31.1, Figure 127.4.2.

e. Fittings, where required, shall be of the same material, and of the same or greater wall thickness as the connecting pipe.

f. Inlet nozzles shall extend inside the tank 1/2 inch to provide a drip lip. This requirement is waived where it interferes with the application of the tank lining. Outlet or drain nozzles located in the bottom of tanks shall be designed with no internal lip so that complete drainage is obtained.

g. The forces and moments imposed by the nozzles on the tanks shall be as specified in this Section.

h. All nozzles shall be furnished as required by this Section. Seller shall also furnish such small socket welding couplings as may be required by the Consulting Engineers. The Consulting Engineers will indicate the exact nozzle locations on the return of the first submittal of the Seller's shop drawings.

401.4 Manholes and Handholes, Etc.:

a. Gaskets for joints between manholes, or handholes and covers shall be as follows, unless otherwise specifically required:

a1. All Tanks: Composition

b. Gaskets shall be so arranged as to avoid damage to the gasket material when manhole or handhole covers are removed and replaced.

c. Where manholes are required on vertical tanks, there shall be two manholes in the tank shell and one manhole in the roof. The shell manholes shall be diametrically opposite. Shell manholes shall be 24 inches, and shall include a davit or a hinged cover to facilitate cover removal. Roof manhole shall be located such that it is easily accessible from the platform. A 12 inch hand rail shall be provided on the shell above the manhole to allow for ease of entry and exit through the manhole.

401.5 Instrument Nozzles:

a. If permitted by tank design, side-entering-level instrument nozzles shall not be more than 6 inches above the bottom of the tank.



- b. Instrument nozzles penetrating the lower head of cone or dished-bottom tanks shall be installed in a horizontal position, sloped to drain into the tank, and cut off square not less than 2 inches inside the tank.
- 401.6 Reinforcements:
- a. Openings in tank shells which are located below the overflow level and which are larger than required to accommodate a 2 inch standard weight coupling shall be reinforced to replace the cross-sectional area of the hole. Reinforcements may be in the nozzle or in the shell, or both.
 - b. The minimum cross-sectional area of the reinforcement shall be not less than the product of the diameter of the hole, in inches, cut in the shell and the shell-plate thickness.
 - c. The portion of the nozzle neck that may be considered as reinforcement is that area lying within 4 times the nozzle wall thickness of both the inside and outside shell surface, plus the area lying within the shell-plate thickness.
- 401.7 External Ladders, Stairways, and Platforms:
- a. Stairways, landing platforms, ladders, and hand railing shall be in compliance with OSHA regulations. Stairways shall be double stringer type supported by a minimum number brackets.
 - b. Ladders and platforms shall be attached to the shell by welding or bolting to brackets fabricated from the same material as the shell. The ladder and platform brackets shall be attached to the shell by fillet welds.
 - c. Each intermediate platforms shall not be less than 2 feet 6 inches wide. Platform design shall incorporate the best access and most economical use of space.
 - d. A 3 feet wide grated walkway with safety gate at ladder access shall be provided on the tank roof. The walkway shall extend from the ladder termination to the manway and the other roof mounted appurtenances. The walkway shall be completely enclosed with handrails and kick plates except at the ladder access opening.
 - e. Ladders shall be hot-dipped galvanized steel.
 - f. A ladder cage is required, and shall begin 8 feet-0 inches above the support floor or grade.
 - g. Grating furnished with the tank shall be hot-dipped galvanized steel and shall satisfy requirements of ASTM A36.
- 401.8 Handrails:
- a. All handrails shall meet or exceed the applicable requirements of codes and regulatory authorities having jurisdiction.
 - b. Handrails shall be hot-formed welded carbon steel round structural tubing conforming to the requirements of ASTM A501, ASTM A500, or ASTM A53 Grade B. Tubing shall be 1-1/2 inch nominal diameter with a minimum 0.145 inch nominal wall thickness. On vertical tanks, handrail shall extend along the shell for at least five feet on each side of the access ladder. Handrails shall be hot-dipped galvanized steel.
 - c. Handrails shall be provided per OSHA requirements.



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- 401.9 Personnel Loading: Roofs and bottoms shall be designed to support maintenance personnel working on the tank.
- 401.10 Vessel Supports and Anchors:
- a. Supports for raised tanks, and anchor plates or anchor rings for flat-bottom tanks shall be provided as indicated in this Section.
 - b. Supports shall have holes for bolting to the floor.
 - c. Supports for raised tanks shall be attached to the tank with pads or saddles as required to distribute the load on the tank.
 - d. Supports for raised tanks shall be of such height as to position the lowest part of tank shell 24 inches above the floor unless otherwise indicated in this Section.
- 401.11 If specified in this Section, Seller shall furnish and install supports for external pipes by others, where the pipe nozzle is in the upper portion of a vertical tank. For dimensional purposes, the pipe will be a vertical riser with the centerline determined by a long-radius elbow attached to the nozzle.
- 401.12 Accessories and Appurtenances:
- a. Tank Ground: Two electrical pads shall be mounted on each tank located outdoors, as specified in this Section, for connection to Owner's ground grid. Grounding pads shall be located 180° apart.
402. MATERIAL REQUIREMENTS
- 402.1 Plate:
- a. Carbon Steel: ASTM A 285 Grades B, C preferred (A 283 Grades B or C, A 36, and A 572 on approval of Consulting Engineers)
- 402.2 Pipe:
- a. Carbon Steel: ASTM A 106 Grade A or B; ASTM A 53 Grade B
- 402.3 Castings:
- a. Carbon Steel: ASTM A 216 Grade WCB; ASTM A 27 Grade 60-30
- 402.4 Fittings:
- a. Carbon Steel: ASTM A 105
- 402.5 Forgings:
- a. Carbon Steel: ASTM A 105
- 402.6 Welding Electrodes:
- a. Carbon Steel: AWS A5.1
 - b. Carbon steel to stainless steel welds shall be made within AWS-A5.4 E309 stainless steel rod:



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- b1. Type 304 SS: AWS A5.4 Type E308
- b2. Type 316 SS: AWS A5.4 Type E316
- 402.7 Structural Supports:
 - a. Carbon Steel: ASTM A 36, ASTM A 992, and ASTM A 572
- 402.8 Internals: Piping material shall be in accordance with this Section.
- 402.9 Fasteners: U-bolts or other fasteners in carbon steel tanks shall be of carbon steel having minimum diameter of 3/8 inch.
- 403. FABRICATION REQUIREMENTS
- 403.1 Material Cutting:
 - a. Carbon steel may be cut to size or shape by machining, shearing, or thermal cutting. Stainless steel may be cut to size or shape by machining or shearing.
 - b. Thermal cutting shall be followed by the removal of approximately 1/32 inch from the cut surfaces by machining or grinding. The finished edge shall be free of irregularities greater in depth than 1/16 inch in any 1/4 inch length.
- 404. ERECTION SERVICES
- 404.1 Seller shall provide the services required to erect the tanks and all appurtenances furnished by Seller. Seller shall be responsible for the complete erection of the tanks and associated equipment.
- 404.2 The Seller shall develop a detailed erection schedule in accordance with the Owner's format. The schedule will be refined with input from the Owner to sequence the tank erection with overall plant construction.
- 404.3 The scope of the installation shall include the furnishing of adequate and competent supervisory personnel and the services of all craftsmen required for the unloading, handling, and erection of tanks. This shall include a full time safety worker who is independent of the work force.
- 404.4 A competent superintendent, to whom instructions may be given and who is vested with authority to make decisions binding on Seller, shall be on the premises at all times during tank erection to represent the Seller.
- 404.5 All personnel are required to complete a safety orientation program prior to commencing work at the jobsite. The safety orientation program will be by Others.
- 404.6 The Seller will be responsible for all of its own equipment needs required to complete the erection of the tanks, including cranes.
- 404.7 Bracing used for erection of the tanks shall be designed and stamped by a professional engineer with a current State of Oklahoma license.
- 404.8 Seller is responsible for temporary office and storage building and all temporary erection facilities. Owner will provide power for trailers, in addition to potable water, sanitary facilities, and



dumpsters for construction waste. Construction power by tank constructor. No landline phone lines available. Fax facilities will be provided by Owner in Owner's construction offices.

- 404.9 Seller shall supply and maintain adequate fire protection facilities (i.e. fire extinguishers) for their working area.
- 404.10 The Seller shall be responsible for the unloading, care, and storage of all materials supplied including materials that arrive prior to the site mobilization of the Seller's workforce.
- 404.11 Seller must remove all internal shipping supports.
- 404.12 The tanks installation shall be in accordance with, but not limited to, the codes listed in Section 301.4 of this Specification.
- 404.13 The tanks installation shall include the assembly and alignment of components where the equipment is shipped unassembled or partially assembled, or where the components are shipped separately.
- 404.14 The tank installation shall include all external cleaning, finish painting, adjusting, lubricating, and testing required to place the tanks in service.
- 404.15 The Seller shall be responsible for the development of a welding program to be used during the installation of the tanks. The details of this program should be included in the welding procedure manual that will be reviewed and approved by the Owner. All welders shall pass the qualification test to be conducted by Seller, and such welders shall be inscribed in "List of Qualified Welders" with the date of qualification, the person's age, and the name of tested person.
- 404.16 If it becomes necessary for the Seller to do any cutting of masonry or concrete work, explicit permission shall be obtained from the Owner.
- 404.17 Seller is responsible to clean the work area on a daily basis.
- 404.18 The Seller will be responsible for the supply and removal of all temporary stairways, ladders, scaffolding, and platforms required to complete the tank's installation.
- 404.19 The Seller shall be responsible for repair or replacement of any damaged equipment, buildings, structures, etc., caused by the Seller.
- 404.20 The Seller shall coordinate all work with the Site General Work Contractor (GWC).
- 404.21 The Seller shall be responsible for grouting of all equipment erected.
- 404.22 The cost born by limited storage yard such as double handling shall be covered by Seller.

405. WELDING

- 405.1 All welding shall be performed in accordance with written qualified welding procedure specifications, which are in accordance with the ASME Boiler and Pressure Vessel Code, Section IX. All welding shall conform to the Oklahoma Welding Act.



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- 405.2 All welder's performance shall be qualified in accordance with the ASME Boiler and Pressure Vessel Code, Section IX.
- 405.3 Welding shall not be performed when the surfaces to be welded are wet with rain, snow, or ice; when rain or snow is falling on such surfaces; or during periods of high winds unless the welder and the work are properly shielded.
- 405.4 No welding shall be performed when the ambient temperature in the immediate vicinity of the weld is below 0°F. When the ambient environmental temperature is below 0°F, a heated structure or shelter around the area being welded may be used to maintain the ambient temperature in the immediate vicinity of the weldment at 0°F or higher. When the base metal temperature is below 32°F, the base metal within 3 inches of where weld metal will be deposited shall be heated to a minimum temperature of 70°F, which shall be maintained during welding.
- 405.5 Welding shall be planned and conducted to minimize warping or distortion.
- 405.6 All welds shall be cleaned of slag and flux between passes and following the final deposit. Stainless steel wire brushes shall be used on stainless steel and aluminum welding.
- 405.7 All double-welded joints shall be back-chipped or arc-gouged to sound metal prior to depositing the second side. Arc gouging is only allowed for ferritic materials.
- 405.8 Welded joints shall not be peened.
- 405.9 Wide welds to overcome poor fit are not permissible. Poor fits shall be remedied by suitable means and approved by Owner.
406. WELDED JOINT TYPES
- 406.1 All shell joints shall be double-welded, full-penetration joints.
- 406.2 All bottom joints in tanks (except flat-bottom tanks) shall be double-welded, full-penetration joints. Lap joints may be used for tanks with flat bottoms fully supported on foundations or grade.
- 406.3 Conical roof-plate joints may be single-welded, full-fillet lap joints. The overlap shall be 5 times the plate thickness but need not exceed 1 inch. If specified in this Section, the roof plates inside the tank shall be seal welded to each other and to the top angle.
- 406.4 All other roof-plate joints shall be double-welded, full-penetration joints.
- 406.5 All nozzle to vessel welds shall be full-penetration welds.
407. INSPECTION AND TESTING
- 407.1 Radiography (when specified):
- a. All radiography shall be in accordance with the procedures and shall comply with the acceptance standards referenced in the industry standards listed above. Applicability of industry standards is determined by tank material, configuration, and service conditions.
 - b. Spot radiography shall be modified as follows:
 - b1. One radiograph shall be taken in the first 10 feet of weld in each vessel and one spot shall be examined for each additional 50 feet of full-penetration butt welds, or fraction thereof.



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- b2. At least 2 intersections of vertical and horizontal joints on each tank, when they exist, shall be included in the radiographs.
 - b3. All films or digital images shall be subject to the Consulting Engineers' review and comment.
 - b4. Seller shall hold film or digital image media for 5 years. At the expiration of the holding period, Seller shall contact the Owner for instructions regarding disposition of the radiographs.
- 407.2 Leak Testing:
- a. Each completed tank shall be leak-tested following fabrication, but prior to painting, coating, or lining the interior. Owner will furnish the water for testing field-erected tanks at a source specified in this Section.
 - b. The tank shall be filled with water and inspected frequently during filling. Closed-top tanks containing solutions with specified gravities greater than 1.0 shall be tested by using a standpipe to produce the equivalent pressure on the tank bottom.
 - c. If water is not available for testing, all joints shall be tested with a vacuum box and soap solution. The gauge on the box shall register a partial vacuum. The differential pressure across the joints shall be at least 5 psi.
 - d. The bottom joints of vertical tanks where the underside of the bottom plate is not accessible shall be tested with a vacuum box and soap solution prior to hydrotesting. If the underside is accessible, the joints shall be inspected using the magnetic particle method.
 - e. Any leaks detected during hydrotesting or vacuum testing shall be repaired by approved procedures.
 - f. Seller shall provide (and remove after use) necessary test pump and temporary piping, valves, blind flanges, etc., for filling and draining the tanks. Seller shall drain the tank as dry as possible by gravity flow and pumping. Disposal of the test water shall be as agreed with Owner.
- 407.3 Tank Interior Lining Testing (When specified):
- a. The interior coating of tanks shall be tested for integrity after installation and curing, for holidays, pinholes, bonding, etc., by an appropriate test.
 - b. The interior coating of tanks shall be tested to determine the thickness of coating applied.
 - c. The minimum acceptable lining thickness shall be the specified nominal thickness.
 - d. Results of all tests shall be documented and submitted with a sketch showing areas examined.
 - e. Owner reserves the right to witness all tests and should be notified 72 hours to the start of any testing.
- 407.4 Conflicts: In the event of variance between the inspection and testing requirements of this Standard Specification and the applicable industry standard listed above, the stricter requirement shall govern.



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408. CLEANING AND PAINTING

408.1 After fabrication and immediately prior to the painting or coating process, the tanks shall be shop cleaned as specified in Table 4-1 below and as follows:



TABLE 4-1
FIELD SURFACE PREPARATION AND PRIME PAINTING REQUIREMENTS FOR VARIOUS MATERIALS

<u>Item</u>	<u>Field Surface Preparation</u>	<u>Shop Prime Paint</u>				
		<u>No. Coats</u>	<u>Type/Color</u>	<u>Dry Film Thickness (mil)</u>	<u>E. I. duPont</u>	<u>Detroit Graphite</u>
<u>Carbon Steel</u>						
Exterior of tank and accessories	Solvent & Commercial Blast Cleaning	1	Alkyd/Brown	2	67-Y-746	501LF Prime Rite
Exterior of surfaces which cannot be finish painted after erection (concealed surfaces)	Solvent & Commercial Blast Cleaning	2	First: Alkyd/Brown Second: Alkyd/Black	2 2	67-Y-746 96-67640	501LF Prime Rite 30 Superior Graphite
Surfaces within 3 in. of a field weld, faying surface under connection angles	Solvent & Commercial Blast Cleaning	None	None	None	None	None
Interior surfaces (unlined) and inside accessories	Solvent & Commercial Blast Cleaning	None	None	None	None	None
Surfaces embedded in concrete and the underside of the bottom plate	None	None	None	None	None	None

408.2 Solvent Cleaning:

- a. Solvent cleaning shall be used primarily to remove oil and grease, and shall conform to the applicable requirements of SSPC Surface Preparation Specification No. 1, Solvent Cleaning.
- b. Solvent Cleaning shall also include removal of soil, cement spatter, drawing compounds, salts, and other foreign matter as set forth in the previously mentioned SSPC Specification.
- c. No flammable or toxic cleaner shall be used.

408.3 Hand Cleaning:

- a. Hand cleaning shall be used primarily to remove loose mill scale, loose rust, and loose paint, and also all slag, weld spatter, and alkaline scale from welded surfaces, by the use of hand brushing, hand sanding, hand scraping, hand chipping, or other hand impact tools, and shall conform to the applicable requirements of SSPC Surface Preparation Specification No. 2, Hand Cleaning.
- b. Oil, grease, and salts shall first be removed by Solvent Cleaning as hereinbefore specified.



- 408.4 Power Tool Cleaning:
- a. Power tool cleaning shall be used primarily to remove loose mill scale, loose rust, and loose paint, and also all slag, weld spatter, and alkaline scale from welded surfaces, by the use of power wire brushes, power impact tools, power grinders, power sanders, or a combination of these methods, and shall conform to the applicable requirements of SSPC Surface Preparation Specification No. 3, Power Tool Cleaning.
 - b. Power tool cleaning shall be used as required to supplement Hand Cleaning, and/or shall be used where specified or directed.
 - c. Oil, grease, and salts shall first be removed by Solvent Cleaning as hereinbefore specified.
- 408.5 Commercial Blast Cleaning:
- a. Commercial blast cleaning shall be used to remove mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels, and shall conform to the applicable requirements of SSPC Surface Preparation Specification No. 6, Commercial Blast Cleaning. Only shot shall be used on interior surfaces containing the liquid.
 - b. Heavy deposits of oil and grease shall first be removed by Solvent Cleaning as hereinbefore specified.
 - c. Excessive rust scale shall be removed by Hand Cleaning or Power Tool Cleaning, as hereinbefore specified, prior to blast cleaning.
- 408.6 Blast Cleaning to “White” Metal:
- a. Blast cleaning to “white” metal shall be used for the same purpose as Commercial Blast Cleaning, and shall conform to the applicable requirements of SSPC Surface Preparation Specification No. 5, Blast Cleaning to “White” Metal. “White metal is defined to mean a surface with a gray white, uniform metallic color, slightly roughened to form a suitable anchor pattern for coatings.
 - b. The depth of anchor pattern shall be as required by the coating manufacturer or as specified in this Section.
 - c. Heavy deposits of oil and grease shall be first removed by Solvent Cleaning as hereinbefore specified.
 - d. Excessive rust scale shall be removed by Hand and/or Power Tool Cleaning, as herein specified, prior to blast cleaning.
 - e. Only shot shall be used on interior surfaces.
 - f. Interior weld seams shall be ground smooth and level. All corners must be smoothly rounded and ground to a ¼-inch minimum radius prior to beginning the blast cleaning operation.
- 408.7 On all work where welding has been done, all surfaces shall have the slag and weld spatter removed and shall be cleaned by Power Tool Cleaning.
- 408.8 The surface preparation for all field touchup painting shall be the same as specified for the shop painting.



409. INTERIOR LINING

409.1 All welding, machining, cutting operations, hydrostatic testing, non-destructive testing, and cleaning procedures must be completed prior to the application of interior linings to tanks.

410. PAINTING (REFER TO TABLE 4-1)

410.1 After cleaning, the tanks shall be prime coat painted in accordance with Table 4-1.

410.2 Field cleaning and painting shall be done after erection and successful testing of the tank.

410.3 If so specified in this Section, internal tank painting may be done prior to leak testing. The minimum drying time of the final coat shall be as recommended by the paint manufacturer. If the tank will be filled with potable water, it shall be disinfected before leak testing. Responsibility for disinfecting shall be as specified in this Section.

410.4 Paint Application:

a. Application of paint shall conform to the applicable requirements of SSPC Paint Application Specification No. 1, Shop, Field, and Maintenance Painting, and to the requirements herein specified.

b. Time Restrictions: The prime coat shall be applied within the following time limitations after completion of specified surface preparation:

b1. Solvent Cleaning, Hand Cleaning, or Power Tool Cleaning – 24 hours

b2. Commercial Blast Cleaning or Blast Cleaning to White Metal – 8 hours

b3. The 8 hours indicated for blast cleaning is approximate depending on the temperature and humidity. The main criteria are that no rust bloom forms on the prepared surface prior to application of the prime coat. If any rust bloom does form, the surface shall be re-prepared before applying the prime coat.

c. Temperature Restrictions:

c1. Paint shall not be applied when the surrounding air temperature is below 40°F or when the temperature is expected to drop to 32°F before the paint has dried.

c2. Paint shall not be applied to steel surfaces which are more than 5°F below the surrounding air temperature, or which are at a temperature of less than 35°F.

c3. Paint shall not be applied to steel surfaces which are set at a temperature of over 125°F unless the paint is specifically formulated for application at the specific temperature. When steel is painted in hot weather, precautions shall be taken to ensure that the specified dry mil thickness of paint is obtained.

d. Moisture and Humidity Restrictions:

d1. Paint shall not be applied in rain, snow, fog, or mist; when the relative humidity results in condensation on metal surfaces due to the difference in temperature between the metal and the surrounding air; or when frost has formed on such surfaces. Table 4-2 below shall be used as a guide for relative humidity restrictions.



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d2. All surfaces shall be perfectly dry before and during painting.

TABLE 4-2

**PERCENT RELATIVE HUMIDITY ABOVE WHICH MOISTURE
 WILL CONDENSE ON METAL SURFACES NOT INSULATED**

Metal Surface Temp., °F	Surrounding Air Temperature, °F												
	40	45	50	55	60	65	70	75	80	85	90	95	100
35	60	33	11	--	--	--	--	--	--	--	--	--	--
40	--	69	39	50	8	--	--	--	--	--	--	--	--
45	--	--	69	45	27	14	--	--	--	--	--	--	--
50	--	--	--	71	49	32	20	11	--	--	--	--	--
55	--	--	--	--	73	53	38	26	17	9	--	--	--
60	--	--	--	--	--	75	56	41	30	21	14	9	--
65	--	--	--	--	--	--	78	59	45	34	25	18	13
70	--	--	--	--	--	--	--	79	61	48	37	29	22
75	--	--	--	--	--	--	--	--	80	64	50	40	32
80	--	--	--	--	--	--	--	--	--	81	66	53	43
85	--	--	--	--	--	--	--	--	--	--	81	68	55
90	--	--	--	--	--	--	--	--	--	--	--	82	69
95	--	--	--	--	--	--	--	--	--	--	--	--	83

END OF SECTION



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EXHIBIT A – ATTACHMENTS

- 501. ATTACHMENT 1 – SITE GENERAL ARRANGEMENT
- 502. ATTACHMENT 2 – TANK CONNECTIONS
- 503. ATTACHMENT 3 – PONCA CITY WATER QUALITY
- 504. ATTACHMENT 4 – DEMINERALIZED WATER QUALITY
- 505. ATTACHMENT 5 – SHOP APPLIED IOZ PRIMER
- 506. ATTACHMENT 6 – TANK DATA SHEETS
- 507. ATTACHMENT 7 – MSDE-2.1.8.5 – WELDING END DETAILS
- 508. ATTACHMENT 8 – CONSTRUCTION FACILITIES & TEMPORARY CONTROLS



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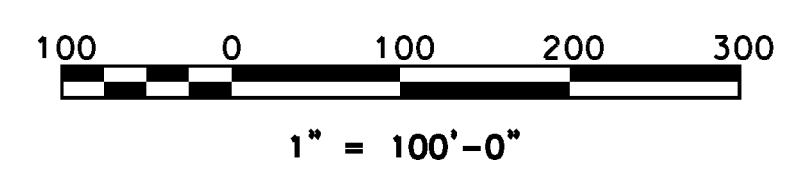
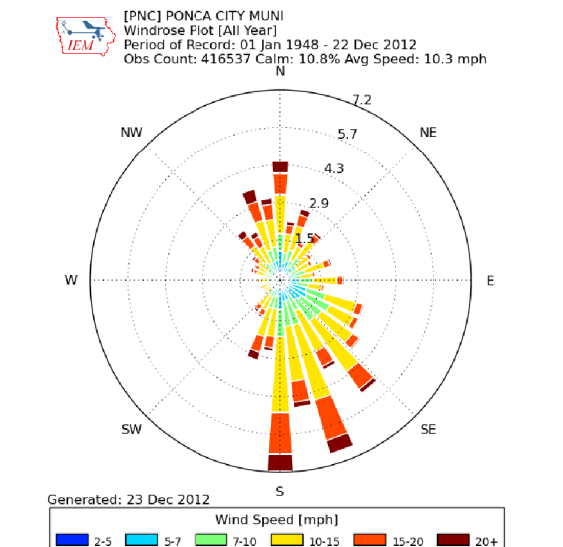
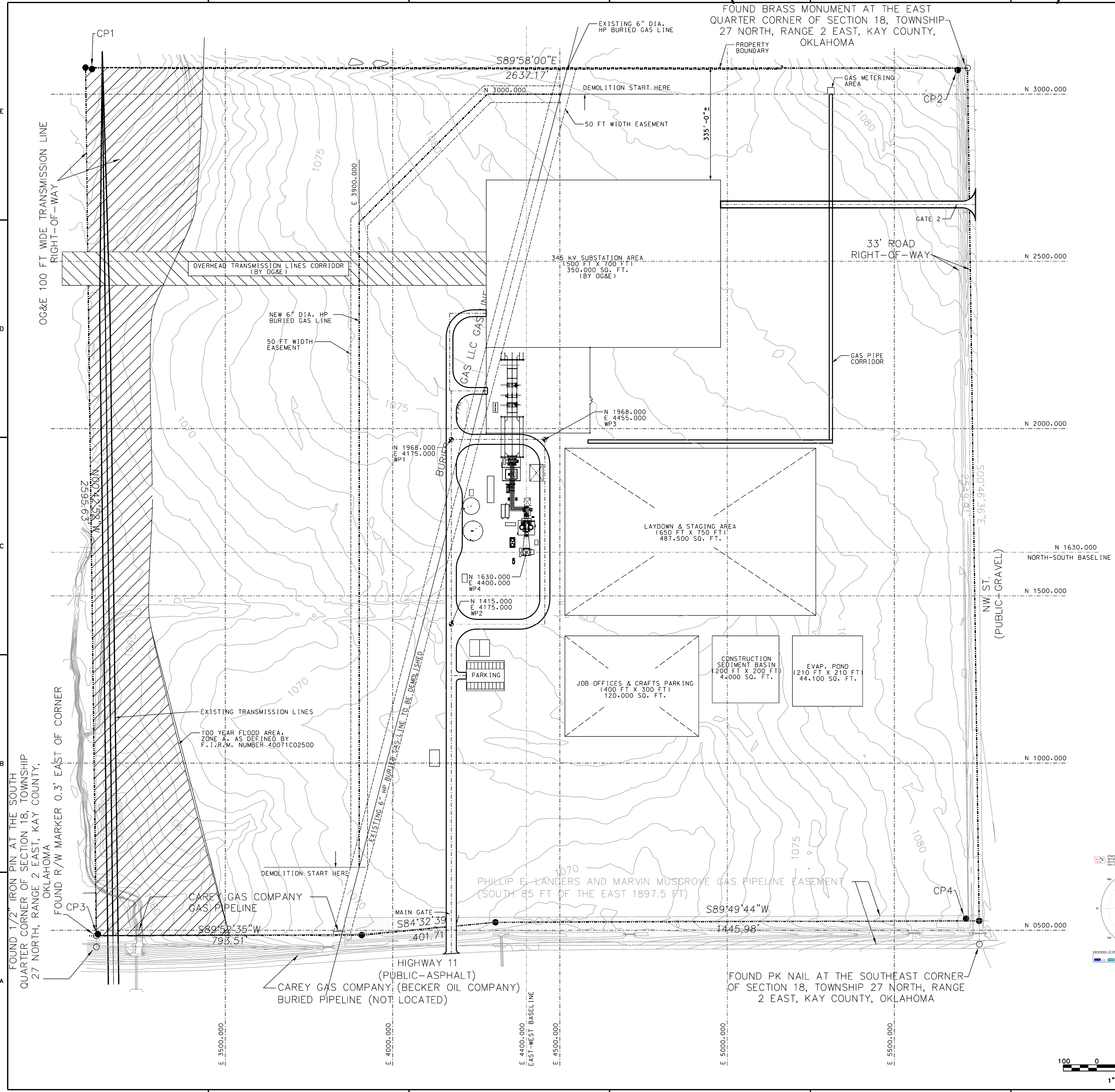


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ATTACHMENT 1:
SITE GENERAL ARRANGEMENT

ATTACHMENT 1 - GENERAL ARRANGMENT (WIP COPY FOR REFERENCE ONLY)

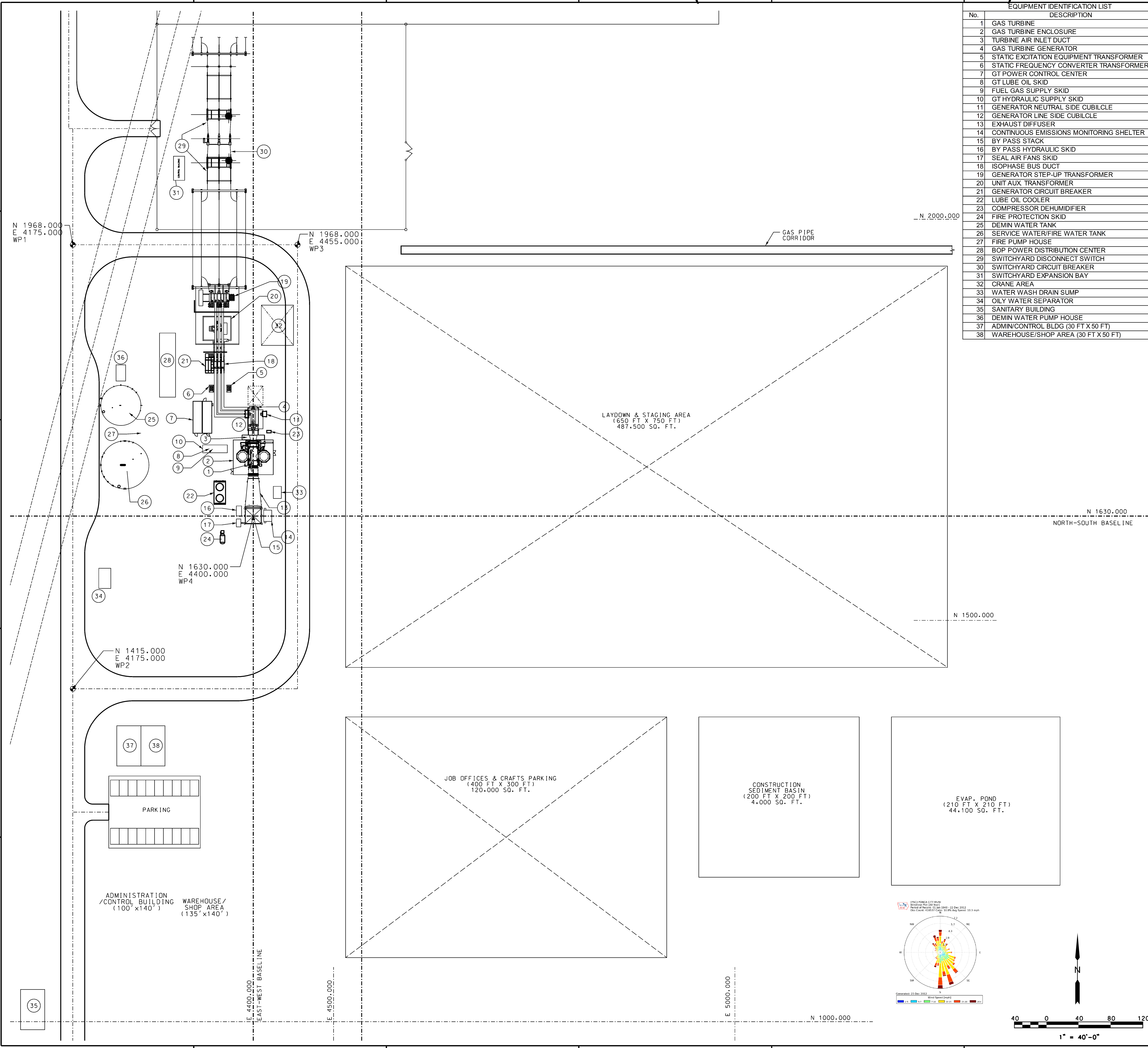
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 Revision 10, Revision Date: 10-16-2009



HOLD INFORMATION		
NO.	DESCRIPTION	
NOTES		
1. SURVEY WAS PERFORMED BY FINLEY ENGINEERING CO., INC (CA 1551) DURING OCTOBER 2012.		
2. THE BASELINE COORDINATE IS SET AT THE PLANT N 1630.000 AND E 4400.000 AND IS EQUIVALENT TO STATE COORDINATES N 661630.000 AND E 2224400.000		
REFERENCE		
DRAWING RELEASE RECORD		
REV.	DATE REL'D	PURPOSE
0	01-21-2013	FOR CLIENT COMMENTS
1	02-08-2013	FOR CLIENT COMMENTS
2	??-??-2013	FOR USE
PREPARED BY: M. VILLANUEVA		
REVIEWED BY: V. SHAH		
APPROVED BY: -		
SPECIFICATION: N/A		
PROJECT NO.: 13018-002		
CAD FILE NAME: M00001.DGN		
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF OKLAHOMA.		
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PROJECT		
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DRAWING TITLE		
SITE DEVELOPMENT PLAN		
DRAWING NUMBER		
MO-0001		
REVISION		
2		
SHEET 1 OF 1		

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ATTACHMENT 1 - GENERAL ARRANGMENT (WIP COPY FOR REFERENCE ONLY)



EQUIPMENT IDENTIFICATION LIST	
No.	DESCRIPTION
1	GAS TURBINE
2	GAS TURBINE ENCLOSURE
3	TURBINE AIR INLET DUCT
4	GAS TURBINE GENERATOR
5	STATIC EXCITATION EQUIPMENT TRANSFORMER
6	STATIC FREQUENCY CONVERTER TRANSFORMER
7	GT POWER CONTROL CENTER
8	GT LUBE OIL SKID
9	FUEL GAS SUPPLY SKID
10	GT HYDRAULIC SUPPLY SKID
11	GENERATOR NEUTRAL SIDE CUBICLE
12	GENERATOR LINE SIDE CUBICLE
13	EXHAUST DIFFUSER
14	CONTINUOUS EMISSIONS MONITORING SHELTER
15	BY PASS STACK
16	BY PASS HYDRAULIC SKID
17	SEAL AIR FANS SKID
18	ISOPHASE BUS DUCT
19	GENERATOR STEP-UP TRANSFORMER
20	UNIT AUX. TRANSFORMER
21	GENERATOR CIRCUIT BREAKER
22	LUBE OIL COOLER
23	COMPRESSOR DEHUMIDIFIER
24	FIRE PROTECTION SKID
25	DEMIN WATER TANK
26	SERVICE WATER/FIRE WATER TANK
27	FIRE PUMP HOUSE
28	BOP POWER DISTRIBUTION CENTER
29	SWITCHYARD DISCONNECT SWITCH
30	SWITCHYARD CIRCUIT BREAKER
31	SWITCHYARD EXPANSION BAY
32	CRANE AREA
33	WATER WASH DRAIN SUMP
34	OLY WATER SEPARATOR
35	SANITARY BUILDING
36	DEMIN WATER PUMP HOUSE
37	ADMIN/CONTROL BLDG (30 FT X 50 FT)
38	WAREHOUSE/SHOP AREA (30 FT X 50 FT)

HOLD INFORMATION	
NO.	DESCRIPTION

NOTES

1. SURVEY WAS PERFORMED BY FINLEY ENGINEERING CO., INC (CA 1551) DURING OCTOBER 2012.
2. THE BASELINE COORDINATE IS SET AT THE PLANT N 1630.000 AND E 4400.000 AND IS EQUIVALENT TO STATE COORDINATES N 661630.000 AND E 2224400.000

REFERENCE	

DRAWING RELEASE RECORD		
REV.	DATE REL'D	PURPOSE
0	01-21-2013	FOR CLIENT COMMENTS
1	02-08-2013	FOR CLIENT COMMENTS
2	??-??-2013	FOR USE

PREPARED BY: M. VILLANUEVA
 REVIEWED BY: V. SHAH
 APPROVED BY: -
 SPECIFICATION: N/A
 PROJECT NO.: 13018-002
 CAD FILE NAME: M00001.DGN

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF OKLAHOMA.

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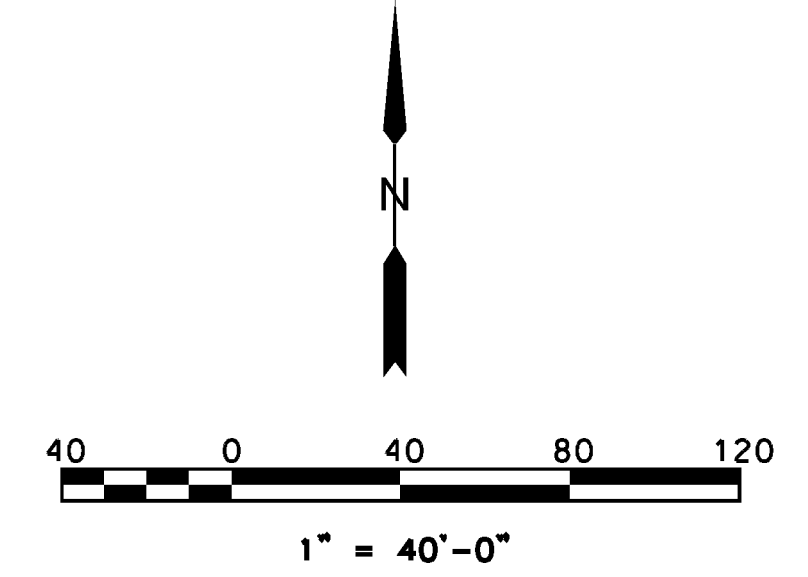
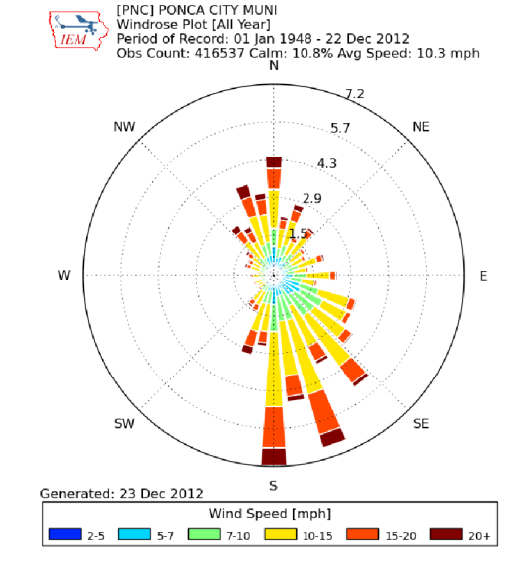
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.

Sargent & Lundy
 SARGENT & LUNDY LLC
 55 EAST MONROE STREET
 CHICAGO, ILLINOIS 60603-5780

OMPA
 OKLAHOMA MUNICIPAL POWER AUTHORITY

PROJECT
 OKLAHOMA MUNICIPAL POWER AUTHORITY
 CHARLES D. LAMB ENERGY CENTER
 COMBUSTION TURBINE GENERATOR PROJECT

DRAWING TITLE	
GENERAL ARRANGMENT PLAN	
DRAWING NUMBER	REVISION
M0-0002	2
SHEET 1 OF 1	1



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 Revision 10, Revision Date: 10-16-2009

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Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Water Tanks



Sargent & Lundy^{LLC}

The logo for Sargent & Lundy LLC consists of a stylized, grey, curved shape resembling a wave or a swoosh, positioned to the left of the company name.

Project No. 13018-002
Specification No.: C-4412
Issue: Bid, Rev. 1
Date: April 15, 2013

ATTACHMENT 2:
TANK CONNECTIONS

ATTACHMENT 2 – TANK CONNECTIONS

FIELD-FABRICATED TANKS

Connection	Designator	<u>Demineralized Water</u>	<u>Fire/Raw Water Tank</u>
		<u>Tank</u>	
		<u>Size (inches)/Connection</u>	<u>Size (inches)/Connection</u>
Suction	[T-1]	[8 /Flange]	[8 /Flange]
Fill	[T-2]	[8 /Flange]	[8 /Flange]
Overflow	[T-3]	[8 /Flange]	[8 /Flange]
Vent	[T-4]	[12 /Flange]	[12 /Flange]
Drain	[T-5]	[6 /Flange]	[6 /Flange]
Manhole	[T-6]	[24 /Flange]	[24 /Flange]
Handhole	[T-7]	[LATER/Flange]	[LATER/Flange]
Recirc	[T-8]	[3 /Flange]	[6 /Flange]
Instrumentation:			
Level	[T-9]	[1 /Flange]	[1 /Flange]
Level	[T-10]	[1 /Flange]	[1 /Flange]

Notes:

- (1) All sizes are preliminary (for bidding purposes) and are to be confirmed prior to Contract.
- (2) Tank shall include a mechanical gauge to indicate level for redundancy in design and measurement of tank level.



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ATTACHMENT 3:
PONCA CITY WATER QUALITY

ATTACHMENT 3 – PONCA CITY WATER QUALITY

Ponca City Water Quality Summary	
Water Quality Item	Range
pH	7.6-8.4
Total Dissolved Solids (TDS)	325-375 ppm
Calcium Hardness	166-240 ppm ¹
Alkalinity	110-190 ppm

Notes:

1. Water is extremely hard when the lime softening system is offline.



Oklahoma Municipal Power Authority
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Raw/Fire Water & Demin. Water Tanks



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Issue: Bid, Rev. 1
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ATTACHMENT 4:
DEMINERALIZED WATER QUALITY

SIEMENS

Siemens Energy, Inc.

ENGINEERING SPECIFICATION

Title	WATER QUALITY RECOMMENDATIONS FOR EVAPORATIVE COOLERS
Titel	

ZDX555	QA00	MBL	015950	UNID	470279227
Proj. Code/Proj.-Kennz.	Doc./UA	Contents Code/Inhaltskennzeichen	Count no./Zähl-nr.		

		Confidential	Vertraulich
Original / Ursprung	Module Coordinator / Modulverantwortlicher	Handling	Handhabung

See Section 2.0 APPLICABLE DOCUMENTS	
Related Documents/Zugehörige Dokumente	Review Level

	Department	Dept. Code	Name	Signature	Date
Prepared by	Auxiliary System Design & Implementation	E F PR SI EN 71	Aditya Thumu Engineer	<i>Aditya Thumu</i>	July 15, 2009
Reviewed by	Auxiliary System Design & Implementation	E F PR SI EN 71	Craig Cortes Principal Engineer	<i>Dan Willems for Craig Cortes</i>	July 15, 2009
Approved by	Auxiliary System Design & Implementation	E F PR SI EN 71	Volker Wild Manager	<i>Dan Willems for Volker Wild</i>	July 15, 2009

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Title: WATER QUALITY RECOMMENDATIONS FOR EVAPORATIVE COOLERS			ZDX555-QA00-MBL-015950		
Project: REFERENCE				Issued: July 15, 2009	
Siemens Energy, Inc., Orlando, FL		Rev. 001	Type: ESP	Page 1 of 6	

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1.0 PURPOSE

The purpose of this document is to define the water quality recommendations for the use of evaporative coolers. In order to minimize the scaling and corrosion, the number of cycles of concentration in the evaporative cooler, as well as makeup water quality are addressed.

These requirements represent the recommended allowable concentrations and it is the operator's responsibility to ensure these recommendations are followed.

2.0 MAKEUP WATER QUALITY RECOMMENDATIONS

The allowable concentrations in the makeup water supplied to the evaporative cooler are as follows.

Table I. Evaporative Cooler Makeup Water Quality Recommendations

Constituent	Concentration Range (ppm)
Calcium Hardness (as CaCO ₃)	50 – 150
Total Alkalinity (as CaCO ₃)	50 – 150
Chlorides (as Cl)	< 50
Silica (as SiO ₂)	< 25
Iron (as Fe)	< 0.2
Oil and Grease	< 2.0
Total Dissolved Solids	30 - 500
Suspended Solids	< 5
pH	6.0 – 8.5
Conductivity	50 – 750 µmhos

Makeup water maintained within these recommendations is expected to allow operation at 1.5 to 3 cycles of concentration in the evaporative cooler with an acceptable scaling index level. The scaling index for site specific water analysis at site operating conditions must be verified by the operator based on the limits presented below.

3.0 SCALING INDEX

The determination of the maximum number of cycles of concentration (as defined as the ratio of the makeup water flow to the blowdown flow) for any water source should be verified utilizing a scaling index. The determination of the number of cycles of concentration also determines the blowdown requirement during operation of the system. There are many scaling indices for determining the scaling characteristics of a given water. For evaporative cooling, it is desirable to maintain a slightly corrosive or scale dissolving index. However, water that is very corrosive such as demineralized water can soften the media in the cooler.

The water at the operating conditions in the evaporative cooler should be maintained such that the scaling index lies within the ranges presented in Table II. Although several indices are listed, the Practical (Puckorius) Stability Index (PSI) is the preferred index of the media vendors.

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Table II. Recommended Scaling Indices for Evaporative Cooling

Index	Recommended Range
Langlier Saturation Index (LSI)	0.25 - 0.75
Ryznar Stability Index (RSI)	5.5 – 6.5
Practical (Puckorius) Stability Index (PSI)	6.0 – 7.0

4.0 ADDITIONAL RECOMMENDATIONS

4.1 Blending

The blending of demineralized, treated or purified water with potable water or raw water is an acceptable means of obtaining the water quality to meet the recommendations. Consideration as to the reliability of the sources is important since use of only demineralized water or raw water could cause scaling or degradation of the cooler media. Generally, interruption of either supply for even a short period of time can cause damage to the media.

4.2 Chemical Additives

Use of chemicals is not recommended to treat the water. Any use of chemicals shall be approved by the media vendor.

4.2.1 Scale Control Additives

4.2.1.1 Cooling tower chemical treatment programs for controlling scale should not be used in evaporative coolers. Cooling tower chemicals are designed to protect the metal heat transfer surfaces from scale deposits. The cooling tower media stays clean due to the high volume of water that flows over the surface. In evaporative coolers, the media is the heat transfer surface and the evaporative surface. Low flow allows salts to concentrate and deposit on the media surface.

4.2.1.2 Chemical treatment utilizing scale inhibitors is not recommended in evaporative coolers. The antiscalants are not effective in the inhibition of scale. The scale inhibitors also concentrate and become a part of the scale deposit.

4.2.2 Additives to Increase Hardness and Alkalinity

Utilizing chemicals to increase hardness and alkalinity in demineralized water is not recommended. The appropriate chemical balance is delicate and is easy to overdose chemicals. Evaporative cooler operators have typically experienced reduced media life when chemically treated demineralized water is the water source. Therefore, media suppliers are reluctant to approve the use of chemically treated demineralized water.

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4.2.3 Biocides

Biocides are not recommended for use in evaporative coolers. Biological growth should be controlled by good housekeeping. Keeping the media dry while the system is down is critical to good housekeeping. The evaporative cooler operator is advised to consult with the evaporative cooler supplier for additional information regarding biocides.

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Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Water Tanks

Sargent & Lundy^{LLC}

Project No. 13018-002
Specification No.: C-4412
Issue: Bid, Rev. 1
Date: April 15, 2013

ATTACHMENT 5:
SHOP APPLIED IOZ PRIMER

ATTACHMENT 5 – SHOP APPLIED IOZ PRIMER

IOZ – INORGANIC ZINC

FIELD-FABRICATED TANKS

PURPOSE

This specification defines the surface preparation, painting and execution requirements for the shop primer on internal and exterior steel of the Charles D. Lamb Energy Center (CDLEC) field-fabricated tanks. The surface preparation and painting is to be accomplished prior to shipping. All work shall have QA/QC inspection to insure compliance to the specification.

SCOPE OF WORK

Items to be prepared and painted under this specification include, but are not limited to the internal and exterior steel plates, vents and manways. Edges shall be tabbed back a minimum of two inches.

1 Surface Preparation

- 1.1 All surfaces to be painted shall be cleaned to a condition as described in the Steel Structure Painting Council SSPC-SP-1 “Solvent Cleaning.” This cleaning shall remove all grease, oil and all other detrimental surface containments prior to surface preparation. Water soluble chlorides shall be $7 \mu\text{g} / \text{cm}^2$ or less prior to preparation and maintained during paint application. After completion of the cleaning, all surfaces will be centrifugal wheel or abrasive blasted with slag to achieve an angular surface profile of not less than 1.0 mils and no greater than 2.0 mils. A mixture of shot and slag is acceptable if the steel is centrifugal wheel blasted using equipment such as a Wheelabrator. Surface profile will be verified using replica tape and observed by an on-site inspector. Abrasive type must be sized to achieve the required profile. The abrasive blast standard shall be a NACE3/SSPC-SP-6 (Commercial Blast Cleaning) to all surfaces.
- 1.2 All prepared surfaces shall be coated within an 8 hour period and shall have the degree of preparation specified and before the surface is painted.

2 Shop Primer

- 2.1 Apply by airless spray or conventional spray, one coat of PPG Diemtcote 9HS (or approved equal) to a dry film thickness of 3.0 to 4.0 mils. The application shall be free of holiday runs.
- 2.2 Ambient Conditions: Apply the IOZ under the following conditions unless the requirements of the coatings manufacture are more stringent.
 - a. Surface and Air Temperature: Between 40⁰F and 110⁰F.
 - b. Relative Humidity: 50% to 90%.
 - c. Dew Point: Surface temperatures of the substrate shall be at least 5⁰F greater than the dew

point temperature of the surrounding air.

3 General

3.1 The IOZ application shall be free of holidays, dry spray, pinholes, mud cracking, and first class workmanship is required. Application shall be in accordance to the SSPC “Good Painting Practice” Volume 1.

3.2 Total film thickness shall be measured using the SSPC-PA-2 specification.

3.3 PPG Amercoat Diemetcote 9HS Product Data Sheet is part of this specification and must be strictly adhered to:

- a. Surface Preparation
- b. Application Data
- c. Application Equipment
- d. Application Data

3.4 Any paint substitution shall be requested in writing and approved in writing is needed.

4 Inspection

4.1 All preparation and paint application shall be inspected. Inspection reports shall be submitted to Oklahoma Municipal Power Authority (OMPA) or their representative.

Dimetcote® 9HS

Inorganic zinc silicate primer

Product Data/ Applications Instructions

- Innovative ethyl silicate formulation provides:
- High volume solids
- Fast drying properties for ease in handling
- High abrasion resistance
- VOC compliance
- No lead or chromate pigments added
- Superior corrosion resistance

Typical Uses

As a single coat, Dimetcote 9HS resists severe weathering and marine environments. When used as a primer with recommended topcoats, Dimetcote 9HS is resistant to industrial chemical exposure. Dimetcote 9HS systems can be used for structural steel, piping, tank exteriors, bridges, offshore platforms, marine hulls, superstructures and decks.

Recommended Topcoats

Standard midcoats/topcoats such as:

Amercoat® 370	Amercoat 235
Amercoat® 385	Amerlock 2
Amerlock® 400	PSX® 700

Dimetcote 9HS surface must be clean and dry before topcoating. Water soluble contaminants may be washed off with water. Remove grease and similar contaminants with an emulsion type cleaner or neutral detergent. Rinse with clean water and allow to dry. Solvent wiping is not satisfactory as contamination may only be spread and not removed. In some cases a mist coat/full coat technique may be required to prevent application bubbling.

Surface Preparation

Coating performance is proportional to the degree of surface preparation. Surface must be cleaned, dry, undamaged and free of all contaminants, including salt deposits. Round off all rough welds and sharp edges, remove all weld spatter. Apply Dimetcote 9HS as soon as possible to avoid rusting or other recontamination. Do not leave blasted steel uncoated overnight. Spot blast if needed.

Steel – New, without pits or depressions, SSPC-SP6. Previously painted or pitted steel uncoated, without pits or depressions, SSPC-SP10. Remove all traces of previous organic coatings as Dimetcote 9HS will not adhere to organic coatings.

Blast to achieve a 1 - 2-mils (25 - 50-microns) anchor profile as indicated by a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Rougher profiles are acceptable, but require increased film thickness for equivalent protection. Remove abrasive residue or dust from surface.

Galvanized surfaces – Remove any oil, soap film or grease from surface with neutral detergent or emulsion cleaner and roughen surface by light abrasive blast SSPC-SP7.

Physical Data

Finish	Flat	
Color*	Green	
<i>*Note: At temperatures over 350°F the Dimetcote 9HS green color will change to a reddish-gray.</i>		
Components	2	
Curing mechanism	Solvent release and reaction with atmospheric moisture	
Dry film thickness per coat	3-4 mils	75-100 microns
Coats	1	
Theoretical coverage	ft ² /gal	m ² /L
1 mil (25 microns)	1283	31.5
3 mils (75 microns)	427	10.5
VOC	lb/gal	g/L
mixed	2.7	323
mixed/thinned (½ pt/gal)	2.8	336
mixed/thinned (¼ pt/gal)	3.0	362
mixed/thinned (1 pt/gal)	3.3	394
Temperature resistance, dry continuous	°F	°C
	750	399
Flash point (SETA)	°F	°C
liquid	55	13
mixed	55	13
Amercoat 930	214	101
Amercoat 12	2	-17
Amercoat 65	78	25
Amercoat 101	145	63

Application Data

Applied over	Prepared steel or galvanizing		
Surface preparation	SSPC-SP6 or 10		
Method	Airless or conventional spray		
Mixing ratio (weight)	1 part liquid to 4.8 parts powder		
Pot life (hours)	°F/°C		
	90/32	70/21	50/10
	8	12	16
Environmental conditions			
Temperature	°F	°C	
air	0 to 120	-18 to 49	
surface	0 to 130	-18 to 54	
Relative humidity	50-90%		
Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation. At freezing temperatures, surface must be free of ice.			
Drying time (ASTM D1640) @ 3 mils @ 50-90% RH			
	°F/°C		
	90/32	70/21	50/10
touch (minutes)	5	15	30
through (minutes)	10	25	50
topcoat (hours)	16	24	24
Thinner	Amercoat 930, 65 or 101		
Equipment cleaner	Thinner or Amercoat 12		

Formerly Amercoat 3382

Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure, hose and tip size may be needed for proper spray characteristics.

Airless spray – Standard equipment, such as Graco Bulldog Hydra-spray or Speeflo Alaskan PZ. **A fine finish tip 0.016-to 0.022-inch or larger must be used.**

Conventional spray – Industrial equipment such as DeVilbiss MBC gun with 2E or 704E cap/tip, or a Binks 18 gun with a 66SS x 67PB nozzle setup. A variable speed agitator in the pressure pot and an oil and moisture trap in the main air supply line are essential. Separate air and fluid pressure regulators are recommended.

Power mixer – Jiffy Mixer powered by an air or explosion-proof electric motor.

Application Procedure

Powder and liquid are packaged in the correct proportions which, when mixed together, yield 0.77 gallon or 4 gallons of Dimetcote 9HS.

Caution – Moisture or water contamination in Dimetcote 9HS Liquid will cause shorten pot life, skinning and gelling.

1. Flush all equipment with thinner or Amercoat 12 cleaner to remove any moisture that may be present. Moisture can cause hardening of coating in equipment.
 2. Stir liquid with an explosion-proof power mixer.
 3. Discard desiccant bag from powder can and gradually stir powder into liquid. Continue stirring until powder is well dispersed, and uniformly blended to a workable consistency.
 4. Strain material through 30 mesh screen to remove undispersed material and prevent possible clogging of equipment.
 5. Pot life is limited and shortened by high temperatures; do not mix more coating than will be used within the specified times.
- Important – At the end of the pot life, “kick-out” or separation of liquid and solids occur, together with gassing. Do not keep mixed material which has exceeded the pot life in tightly closed containers as gassing can create enough pressure to cause containers to burst. Cover containers loosely.*
6. Keep containers loosely covered during use to prevent skinning or gelling due to moisture in air. Skim off skins and strain material through cheesecloth or 30 mesh screen to remove any remaining skin pieces. Discard gelled material.
 7. Thin for workability or when a rough film or “dry spray” is obtained because of fast solvent evaporation during hot weather or high wind. Use 2 oz. of Amercoat 930 or Amercoat 101 per gallon of mixed coating. For low temperatures (60°F) or below or when experiencing slow drying, use 2 oz. of Amercoat 936 or Amercoat 65 per gallon mixed of coating. If needed, use more thinner in 2 oz increments until good spray ability and film build is achieved.
 8. Adjust spray equipment to apply an even wet coat with minimize over spray.
 9. Continue very slow stirring during application to maintain uniformity of material. Avoid fast stirring as this may cause a rise in material temperature and moisture entrainment shortening pot life and causing gelling.
 10. Apply in even, parallel passes, overlap each pass 50 percent. Pay special attention to welds, cut-outs, sharp edges, rivets, bolts, etc., to insure proper thickness. Keep pressure pot at approximately the same elevation as spray gun for proper material delivery to gun.
 11. Prevent contact with water until the freshly applied coating is dry to touch.

12. When dry through, check film thickness with a nondestructive dry film thickness gauge. Recoat if greater thickness is required. Normal recommended thickness is 3-4 mils (75-100 microns). Total dry film thickness must not exceed 8 mils (200 microns). Greater thickness may develop cracking
13. Random pinholes, holidays and small damaged or bare areas can be touched up by brush when film is dry to touch. Larger areas should be resprayed.

Note - Drying and topcoating times will be longer when film thickness is over 4 mils (100 microns), ventilation and air movement are restricted and temperatures or relative humidities are lower. A water mist sprayed over the coating when the film is dry to touch will accelerate hardening at lower humidities.

14. In confined areas, ventilate with clean air during application and drying until all solvents are removed. Temperature and relative humidity of the air must be such that moisture will not condense on the surface until after material is dry to touch.
15. Clean equipment with thinner or Amercoat 12 cleaner immediately after use or at least at the end of each working day or shift. Clean spray guns more often during hot weather. When left in equipment, Amercoat 9HS will harden and plug spray equipment.

Shipping Data

Packaging unit	.77-gal	4-gal
liquid	3.707 lbs in 1-gal can	19.2 lbs in 5-gal can
powder	17.76 lbs in 1-gal can	92.5 lbs in 5-gal can
Shipping weight (approx)	lb	kg
0.77-gal unit		
liquid	4.4	2
powder	18.5	8.4
4-gal unit		
liquid	22.3	10.1
powder	97.7	44.4
Shelf life when stored indoors at 40 to 100°F (4 to 38°C)		
liquid	10 months from manufacture date**	
powder	2 years from shipment date	

***Note: See manufacture date on container label. Improper storage can result in moisture contamination which will either shorten potlife or result in gelling before shelf life expires.*

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

Mixed product is nonphotochemically reactive as defined by South Coast Air Quality Management District's Rule 102 or equivalent regulations.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of both components. Safety precautions must be strictly followed during storage, handling, and use.

Caution – Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. PPG makes no recommendation about the types of safety measures that may need to be adopted because these depend on application and space, of which PPG is unaware and over which it has no control.

If you do not fully understand the warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for industrial use only. Not for residential use in California.



**PPG Protective &
Marine Coatings**

www.ppgpmc.com/northamerica

One PPG Place, Pittsburgh, PA 15272 • Tel: 888-9PPGPMC



Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Water Tanks



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Project No. 13018-002
Specification No.: C-4412
Issue: Bid, Rev. 1
Date: April 15, 2013

ATTACHMENT 6:
TANK DATA SHEETS

ATTACHMENT 6 – TANK DATA SHEETS

FIELD ERECTED TANKS

	Demineralized Water Tank	Raw/Fire Water Tank
Scope of Supply:		
Equipment Number.....	[<u> LATER </u>]	[<u> LATER </u>]
Tank Name.....	[<u>Demineralized Water Tank</u>]	[<u>Raw Water Tank</u>]
Tank Type.....	<input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal	<input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal
Fabrication at	<input checked="" type="checkbox"/> Field <input type="checkbox"/> Shop	<input checked="" type="checkbox"/> Field <input type="checkbox"/> Shop
Quantity (Nos.)	[<u> 1 </u>]	[<u> 1 </u>]
Design Standards	[<u> AWWA D100 </u>]	[<u> AWWA D100 </u>]
Appurtenances include:		
Dip pipe (Yes/No).....	[<u> No </u>]	[<u> No </u>]
Anti-vortex device (Yes/No).....	[<u> Yes </u>]	[<u> Yes </u>]
Gauge hatch (Yes/No).....	[<u> No </u>]	[<u> No </u>]
Type of manhole	<input checked="" type="checkbox"/> Davit Type <input type="checkbox"/> Bolted Type	<input checked="" type="checkbox"/> Davit Type <input type="checkbox"/> Bolted Type
Hand rail above the manhole for ease of entry/exit	[<u> Yes </u>]	[<u> Yes </u>]
Accessories:		
Safety valves (Yes/No)	[<u> No </u>]	[<u> No </u>]
Flame arrestor (Yes/No)	[<u> No </u>]	[<u> No </u>]
Mechanical Gauge to Indicate Level (design redundancy)	[<u> Yes </u>]	[<u> Yes </u>]

	Demineralized Water Tank	Raw/Fire Water Tank
Companion flanges, gaskets and fasteners at terminal points (Yes/No).....	[<u> Yes </u>]	[<u> Yes </u>]
Blanking flanges of all connections (Yes/No)	[<u> Yes </u>]	[<u> Yes </u>]
Ladder/stairs(optional) to roof	[<u> Yes </u>]	[<u> Yes </u>]
Operating Conditions:		
Operating capacity (gallons) ⁽¹⁾	[<u> 100,000⁽¹⁾ </u>]	[<u> 300,000⁽¹⁾ </u>]
Operating pressure (psi)	[<u> Atmospheric </u>]	[<u> Atmospheric </u>]
Operating temperature (°F)	[<u> LATER </u>]	[<u> LATER </u>]
Specific gravity of the service fluid used for design:	[<u> LATER </u>]	[<u> LATER </u>]
Filling rate of the tank (gpm)	[<u> LATER </u>]	[<u> LATER </u>]
Emptying rate of the tank (gpm)	[<u> LATER </u>]	[<u> LATER </u>]
Tank Dimensions (Seller to finalize the following):		
Outer diameter (feet) ⁽¹⁾	[<u> 27'-0" ⁽¹⁾ </u>]	[<u> 47'-0" ⁽¹⁾ </u>]
Height (feet) ⁽¹⁾ including appurtenances	[<u> 24'-0" ⁽¹⁾ </u>]	[<u> 24'-0" ⁽¹⁾ </u>]
Corrosion allowance (inches) tank bottom only	[<u> 1/16" </u>]	[<u> 1/16" </u>]
Type of foundation.....	[<u>Concrete Ring</u>]	[<u>Concrete Ring</u>]
Materials (Seller to finalize the following):		
Shell	[<u> A36 </u>]	[<u> A36 </u>]
Bottom plates	[<u> A36 </u>]	[<u> A36 </u>]
Roof/end plates	[<u> A36 </u>]	[<u> A36 </u>]
Manway neck.....	[<u> By Seller </u>]	[<u> By Seller </u>]
Manway flanges	[<u> By Seller </u>]	[<u> By Seller </u>]

	Demineralized Water Tank	Raw/Fire Water Tank
Gaskets.....	<u>[Non-asbestos inorganic fiber composite]</u>	<u>[Non-asbestos inorganic fiber composite]</u>
Studs and nuts	<u>[By Seller]</u>	<u>[By Seller]</u>
Bolting for structure.....	<u>[By Seller]</u>	<u>[By Seller]</u>
External gussets	<u>[By Seller]</u>	<u>[By Seller]</u>
Tank structures (wind girders).....	<u>[By Seller]</u>	<u>[By Seller]</u>
Ladders/stairs(optional) and platforms (not internal to tank).....	<u>[Hot-dipped galvanized steel]</u>	<u>[Hot-dipped galvanized steel]</u>
Pipe fittings	<u>[No]</u>	<u>[No]</u>
Hand rails	<u>[6' on either side of manway]</u>	<u>[6' on either side of manway]</u>
Tank nozzles/connection.....	<u>[See Attachment 2]</u>	<u>[See Attachment 2]</u>
Pipe flanges.....	<u>[Per Part 4]</u>	<u>[Per Part 4]</u>
Inspection and Testing:		
Radiography.....	<input checked="" type="checkbox"/> Yes comply with requirements	<input checked="" type="checkbox"/> Yes comply with requirements
Leak Testing (Yes/No).....	<u>[Yes]</u>	<u>[Yes]</u>
Tank interior coating testing (Yes/No).....	<u>[Yes]</u>	<u>[Yes]</u>

Notes:

(1) All capacities/sizes are preliminary (for bidding purposes) and are to be confirmed prior to Contract.



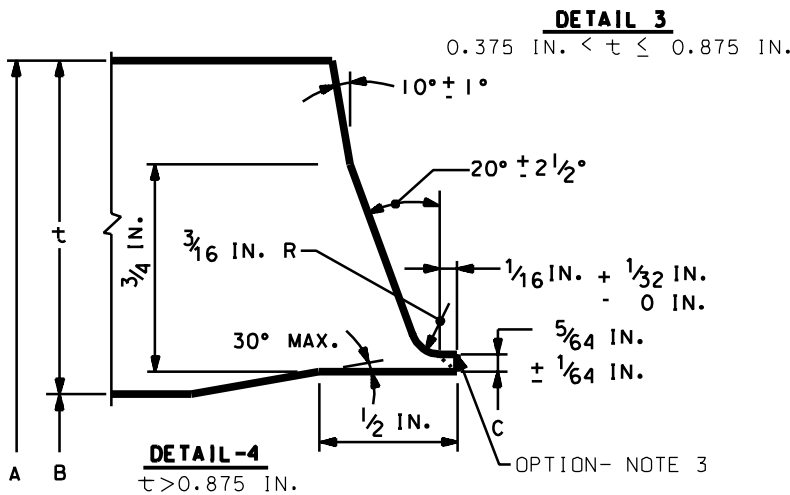
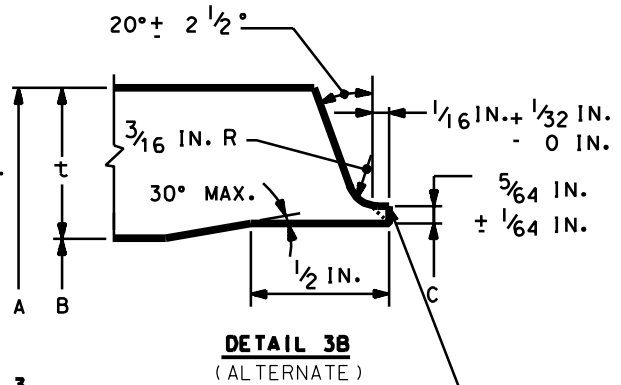
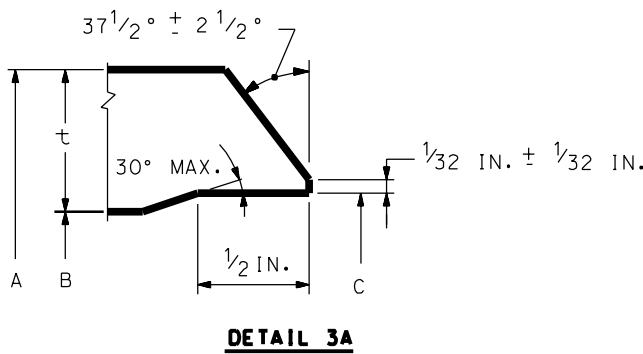
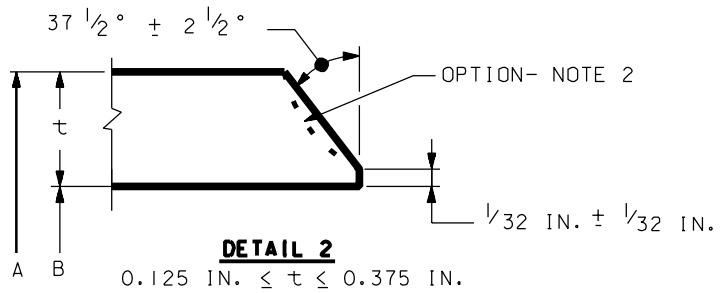
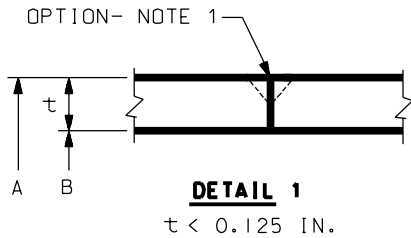
Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Water Tanks



Project No. 13018-002
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ATTACHMENT 7:
MSDE-2.1.8.5 – WELDING END DETAILS

WELDING END DETAILS: OPEN ROOT GTAW WELDING (NOTE 5)



OPTION- NOTE 3

LEGEND

- A- NOMINAL O.D. OF PIPE
- B- NOMINAL I.D. OF PIPE
- C- I.D. OF PIPE AT LAND.
TOLERANCE +0.010 IN.- 0.040 IN.
- C= $A - 0.031 - 1.75t - 0.010 \text{ IN.}$
- t- NOMINAL WALL THICKNESS

NOTES:

1. AS AN OPTION, JOINT MAY BE SLIGHTLY CHAMFERED OR GROUND IN V-SHAPE.
2. AS AN OPTION, BEVEL MAY BE GROUND TO A ROUNDED PROFILE ON ONE OR BOTH SIDES OF JOINT AS REQUIRED.
3. AS AN OPTION, ROOT WELD FACE MAY BE GROUND TO A FEATHEREDGE.
4. REFER TO MSDE-2.1.8.1 FOR GENERAL NOTES.
5. BUTT WELDING END PREPARATION DIMENSIONS CONTAINED IN ASME B16.25 OR ANY OTHER END PREPARATION WHICH MEETS THE WPS ARE ACCEPTABLE.

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Sargent & Lundy^{LLC}

The logo for Sargent & Lundy LLC consists of a stylized, grey, curved shape resembling a wave or a swoosh, positioned to the left of the company name.

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ATTACHMENT 8:
CONSTRUCTION FACILITIES & TEMPORARY
CONTROLS

ATTACHMENT 8 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

FIELD-FABRICATED TANKS

PART 1 - GENERAL

101. EXTENT

101.1 This Section covers the following areas:

- a. Temporary utilities: electricity, water, and sanitary facilities.
- b. Temporary controls: barriers and enclosures, cleaning, fire prevention equipment, noise, dust and erosion controls.
- c. Temporary construction: equipment, scaffolding, etc.
- d. Station rules and security.

101.2 Any heating facilities or temporary weather shielding required for the performance of the Work shall be furnished by Seller. Open fires WILL NOT BE PERMITTED at any time. Heating equipment shall be as approved by Owner's Representative.

102. TEMPORARY ELECTRICITY

102.1 Electric power for construction purposes will be furnished to the Seller by the Owner. The Owner will not be responsible for the failure of any electrical supply.

102.2 The Owner will provide 120/208 volt, single-phase service and 480 volt, three-phase service at a location in the vicinity of the work.

102.3 Provide and maintain all lines, extensions and equipment required for the work, but only at such locations and in such a manner as may be authorized by the Owner's Representative.

102.4 Furnish and install GFCI's as required in Section 305 of the National Electrical Code; remove GFCI's when work is complete.

103. TEMPORARY WATER SERVICE

103.1 Owner provides a source of service water (not potable) at one location on the site. The Seller may use reasonable quantities of this water, free of charge, in the performance of his work.

103.2 The Owner assumes no liability for the failure of water facilities.

103.3 If potable water is not available at the site, Seller shall provide drinking water for the use of his employees.

103.4 Post warning signs at all taps and outlets for service water, stating the water is not suitable for drinking.

103.5 Furnish all material, connect to existing waterline and install, as directed by the Owner's Representative, and maintain such branch mains, risers, outlets and fire hoses to furnish adequate fire protection for all temporary and finished work throughout the construction period.

103.6 If potable water is available on the project site, Seller shall use due care to protect Owner's domestic water supply from contamination. No connections shall be made or any water used without approval from Owner's Representative for each connection. A positive disconnection shall be maintained between domestic supply and containers used on job for construction purposes

or during filling of tanks or equipment, etc. Similar precautions shall be followed to prevent contamination by interflow or siphonage through direct connections to waste or drain lines.

103.7 Seller shall provide his own storage vessels, coolers, ice, water containers, etc., as required for his own drinking water use. Seller shall supply a trash can with each drinking water container to receive used paper cups. Seller shall maintain drinking water container, supply, suitable water cups and dispose of trash as required.

103.8 Seller shall furnish labor and material for all temporary connections he requires. Seller shall provide his own shutoff valves and hose connections.

103.9 Upon completion of the Work, Seller shall return all water systems to their original condition and remove all of Seller's temporary equipment and facilities, unless Owner has previously agreed differently.

104. TEMPORARY SANITARY FACILITIES

104.1 Provide and maintain required facilities and enclosures.

104.2 The Owner's Representative will designate the location for the Seller's facilities.

104.3 The use of the Station's sanitary facilities by Seller's employees is not permitted.

105. STORAGE AND TEMPORARY BUILDINGS

105.1 Outdoor space for the location of Seller's office, shops or warehouses and the storage of materials will be provided by Owner without charge. Owner will designate the areas that will be available for such use at the time Bidder visits or when the contract is finalized. All temporary facilities required by Seller must be provided by Seller.

105.2 Temporary buildings required by Seller, including associated electrical work and heating facilities, shall be erected and maintained by him and shall be removed by Seller at the termination of their usefulness or termination of the job. Any temporary construction office to be erected within the main power station building shall be of sheet metal construction with a steel frame.

105.3 Prior to erection of any temporary buildings, Seller shall submit plans to Owner for general approval of construction and appearance before the buildings may be erected.

105.4 Material and equipment unloaded and placed in storage at the site by Seller shall be stored in manner approved by Owner's Representative.

106. BARRIERS

106.1 Provide barriers to prevent unauthorized entry to construction areas and protect existing facilities and adjacent properties from damage from construction and demolition.

106.2 Protect non-owned vehicular traffic, stored materials, site and structures from damage.

107. PROTECTION OF WORK AND PROPERTY

107.1 Protect installed work and provide special protection where specified in individual specification sections.

107.2 Provide temporary and removable protection for installed products. Actively provide control in immediate work area to minimize damage.

- 107.3 Seller shall provide his own temporary fire protection facilities for the equipment and materials furnished by him or the Owner and for his temporary construction buildings and structures. This equipment shall be maintained and inspected in accordance with applicable NFPA codes.
- 107.4 Seller's employees shall not remove Owner's installed fire extinguisher from their mountings unless they are needed to fight an actual fire. In such cases, the fire extinguisher shall be returned to a location designated by Owner's Representative for recharging.
- 107.5 Seller's personnel shall report all fires by calling a telephone extension that will be identified by Owner at a site meeting. In reporting a fire, Seller's personnel shall furnish the following information:
- a. Location
 - b. Number of injured personnel
 - c. Nature of fire
 - d. Name
 - e. Company name
 - f. Station equipment affected
 - g. Fire fighting equipment used
- 107.6 The station fire alarm signal tone will also be identified at a site meeting. This alarm requires no immediate action on the part of Seller personnel. However, anyone discovering a fire is expected to remove injured personnel, notify personnel in the area of the fire, and send for help.
- 107.7 Cleaning agents or solvents brought by Seller into any of Owner's buildings shall be stored, handled and used in accordance with current standards.
- 107.8 Provide sufficient quantity and type of fire extinguisher during the progress of the work to extinguish fires caused by the execution of the work of this Contract. Fire extinguishing equipment shall meet applicable OSHA and governing codes.
- 107.9 Provide on site, during construction, all equipment necessary to prevent or overcome flooding of excavated areas.
- 107.10 Protection Required During Construction: In addition to OSHA, State and standard protection precautions required during the work protection for/from the following shall be provided:
- a. Erosion and sediment control of the work areas and as indicated on the Design Drawings.
 - b. Dust caused by truck traffic through residential areas and on the Project Site.
 - c. Noise caused by construction traffic through residential areas, especially before 7:00 a.m.
108. CONSTRUCTION AIDS
- 108.1 Provide and maintain all necessary construction equipment, cranes, tools, hoists, scaffolding, ladders, guards and other arrangements necessary for the proper execution of the work or required by law.
109. PROGRESS CLEANING
- 109.1 Seller shall prevent at all times any unnecessary accumulation or scattering of materials, tools and equipment around the Premises. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.

- 109.2 Remove waste materials, debris and rubbish from site as directed by the Owner's Representative.
- 109.3 Seller shall dispose of steel scrap and trash in appropriate receptacles designated and provided by Owner. Unless noted otherwise elsewhere in this Specification, Owner will dispose of steel scrap and trash off site. Seller shall cut any materials too large to fit into dumpster and place items so they are not protruding out top of container. Under no circumstances shall any rubbish or waste be dropped or thrown from one level to another within or outside any building.
- 109.4 If Seller fails to comply with any of the above provisions, Owner will have the right to remove debris, tools, and equipment, and to charge the cost of such removal to Seller. Such charge shall apply as a credit on the Contract amount.
- 109.5 Hazards Control:
- a. Store volatile wastes in the appropriate covered container and remove from premises daily.
 - b. Prevent accumulation of wastes which create hazardous conditions.
 - c. Provide adequate ventilation during use of volatile or noxious materials.
- 109.6 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- a. Do not burn or bury rubbish or waste materials on project site.
 - b. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary sewers.
 - c. Do not dispose of wastes into streams or waterways.
110. STATION RULES AND SECURITY
- 110.1 Seller shall abide by all station rules and regulations Owner may have in effect at the Work site pertaining to handling of equipment, tools and materials and proper supervision of his subcontractors and construction personnel.
- 110.2 Owner's gate officers are not permitted to admit Seller's or subcontractor's employees until they have been identified by responsible representatives of Seller or subcontractor. As an alternative, Owner may require Seller to establish a "brassing" system for identification.
- 110.3 Seller personnel vehicles shall be subject to search upon entering and leaving the premises.
- 110.4 There will be no admittance of Seller's personnel to the existing plant facilities, unless specifically authorized by Owner's Representative.
- 110.5 Seller shall establish his own security to properly safeguard the Work, equipment, materials and tools under his care. Owner accepts no responsibility for loss or damage of such equipment, material or tools. Seller's personnel shall follow the rules and regulations for security established by the Station. In the event Seller wishes to provide his own guard service (at his expense), he must obtain Owner's Approval before implementing.
- 110.6 Seller shall be accountable for the actions of his personnel on station property.
- 110.7 Seller employees willfully in violation of Owner's rules regarding the following are subject to immediate removal from the job site:
- a. Safety rules
 - b. Drinking alcoholic beverages on job site, including parking lot
 - c. Under the apparent influence of alcohol
 - d. Under the apparent influence of controlled substances

- e. Gambling
 - f. Fighting
 - g. Willfully damaging equipment, materials, tools, etc.
 - h. Possession of firearms
 - i. Sleeping
 - j. Theft
 - k. Making false claims of injury
- 110.8 Seller's and subcontractor's employees shall be restricted to the immediate area of the Work and to approved storage and office areas. Routes for entry and egress shall be established in advance by Owner.
- 110.9 Seller shall obtain information from the Owner as to all restricted areas and shall be responsible for policing his personnel to keep them out of such restricted areas.
- 110.10 Seller shall not alter plant structures or devices other than as described in the Contract Documents except by written authorization of the Owner.
111. REMOVAL OF UTILITIES, FACILITIES AND CONTROLS
- 111.1 Remove temporary utilities, equipment, facilities and materials prior to final inspection.
- 111.2 Clean and repair damage caused by installation or use of temporary work.
- 111.3 Restore existing facilities used during construction to original or specified condition.

END OF SECTION



Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Tanks

Sargent & Lundy^{LLC}

Project No. 13018-002
Specification No.: C-4412
Issue: Bid, Rev. 1
Date: April 15, 2013



CHARLES D. LAMB ENERGY CENTER
REQUEST FOR PROPOSAL
EXHIBIT B
PROPOSAL PRICING & PROPOSAL DATA PAGES: C-4412

RAW/FIRE WATER & DEMINERALIZED
WATER FIELD-FABRICATED TANKS
ISSUE: BIDS – REVISION 1
APRIL 15TH, 2013

Prepared By
Sargent & Lundy, L.L.C.
55 East Monroe Street
Chicago, Illinois 60603

Sargent & Lundy^{LLC}



Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Tanks



Project No. 13018-002
Specification No.: C-4412
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ATTACHMENT 1:
PROPOSAL PRICING PAGES



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks



Project No. 13018-002
 Specification No.: C-4412
 Issue: Bid, Rev. 1
 Date: April 15, 2013

PROPOSAL PRICING

NAME OF BIDDER: _____

INSERT ALL INFORMATION WITHIN THE BRACKETS

1.0 GENERAL INSTRUCTIONS

Seller shall submit firm lump sum pricing by completing the attached bid sheet for each item delineated for the WORK. For "other alternatives being bid," Seller shall duplicate the bid sheet format, as necessary.

Seller shall submit a base bid which most closely meets the Specifications. Seller may offer alternatives or options to its base bid for Owner's consideration covering equipment, sizes, or designs, which Seller believes are preferable to those outlined in the Specifications. Descriptions of alternatives shall be submitted on a separate sheet with the bid entitled "Alternates and Options to the Base Bid." Seller shall provide additional pricing on all alternates or options.

Seller shall include in its bid all WORK that is indicated in the Request for Proposal which is normally considered part of the type of work covered by the Specifications, whether or not such work is fully detailed in the Specifications.

2.0 DELIVERY DATES

Seller shall provide the following schedule delivery commitments in terms of months after receipt of award:

Delivery of the Raw/Fire Water Tank materials to Site: _____

Delivery of the Demineralized Water Tank materials to Site: _____



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks



Project No. 13018-002
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PROPOSAL PRICING

NAME OF BIDDER: _____

INSERT ALL INFORMATION WITHIN THE BRACKETS

3. PROPOSAL PRICING

- 3.1 TOTAL FIRM PRICE LUMP SUM, for engineering, procurement, fabrication, delivery, freight on board (F.O.B.) at the Charles D. Lamb Energy Center, for the Oklahoma Municipal Power Authority as identified in Specification C-4412 based on meeting all of the conditions of the Owner’s Contract documents, unless exceptions are specifically listed and identified as such in the Proposal. Without limitation, it is understood that this price is firm and includes all activities (i.e., engineering, designing, furnishing, fabricating, shipping protection, delivery, overhead, profit and any travel and living expenses for technical field assistance) required by the Seller to supply one (1) Fire/Raw Water Tank and one (1) Demineralized Water Tank, and is not subject to increase due to changes in the cost of labor or material or to any other factor, except changes in the Scope of Work or causes specifically stated in the Contract Documents. [US\$ _____]
- 3.1.1. Amount included in Item 3.1 above to perform engineering [US\$ _____]
- 3.1.2. Amount included in Item 3.1 above for fabrication/delivery of one (1) Raw/Fire Water Tank [US\$ _____]
- 3.1.3. Amount included in Item 3.1 above for erection of one (1) Fire/Raw Water Tank [US\$ _____]
- 3.1.4. Amount included in Item 3.1 above for fabrication/delivery of one (1) Demineralized Water Tank [US\$ _____]
- 3.1.5. Amount included in Item 3.1 above for erection of one (1) Demineralized Water Tank [US\$ _____]
- 3.1.6. Amount included in Item 3.1 above for fabrication/delivery of one (1) ladder for the Raw/Fire Water Tank [US\$ _____]
- 3.1.7. Amount included in Item 3.1 above for erection of one (1) ladder for the Raw/Fire Water Tank [US\$ _____]
- 3.1.8. Amount included in Item 3.1 above for fabrication/delivery of one (1) platform on top of the Raw/Fire Water Tank [US\$ _____]
- 3.1.9. Amount included in Item 3.1 above for erection of one (1) platform on top of the Raw/Fire Water Tank [US\$ _____]
- 3.1.10. Amount included in Item 3.1 above for fabrication/delivery of one (1) ladder for the Demineralized Water Tank [US\$ _____]



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks

Project No. 13018-002
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- 3.1.11. Amount included in Item 3.1 above for erection of one (1) ladder for the Demineralized Water Tank [US\$ _____]
- 3.1.12. Amount included in Item 3.1 above for fabrication/delivery of one (1) platform on top of the Demineralized Water Tank [US\$ _____]
- 3.1.13. Amount included in Item 3.1 above for erection of one (1) platform on top of the Demineralized Water Tank [US\$ _____]
- 3.1.14. Amount included in Item 3.1 above for insurance, packaging and freight terms [US\$ _____]
- 3.1.15. Amount included in Item 3.1 price above for Technical Field Advice Services [US\$ _____]
- 3.1.16. Number of Technical Field Service personnel and number of days included in Item 3.1.15 above No. people/days [_____ / _____]
- 3.1.17. Has Bidder furnished a description with its proposal of the Technical Field Advice Services included in Items 3.1.15 and 3.1.16 above Yes/No [_____]
- 3.1.18. Has Bidder furnished unit pricing in its proposal for additional Technical Field Service Yes/No [_____]
- 3.1.19. Amount included in Item 3.1 price above for spare parts for initial commissioning [US\$ _____]
- 3.1.20. Amount included in Item 3.1 price above for the cost of the Performance Bond or for the cost of the Letter of Credit [US\$ _____]



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks



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PROPOSAL PRICING

NAME OF BIDDER: _____

INSERT ALL INFORMATION WITHIN THE BRACKETS

3.2 OPTIONS:

3.2.1. OPTION 1: Bidder to provide staircases instead of ladders with cages. [US\$ _____]

3.2.2. The above option is open for acceptance in writing on or before the following date:

Option 1..... [_____]

3.3 TAXES:

3.3.1. Bidder shall confirm that no tax has been included in the price column. (Answer "No Tax Included") [_____]

3.4 CONDITION:

3.4.1. Bidder hereby agrees that its proposal will be valid for acceptance by Company for a period of 180 days from the date of the proposal submittal Yes/No [_____]

3.4.2. State where in Bidder's proposal, payment terms have been indicated [_____]



Oklahoma Municipal Power Authority
 Charles D. Lamb Energy Center
 Raw/Fire Water & Demin. Tanks



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PROPOSAL PRICING

NAME OF BIDDER: _____

INSERT ALL INFORMATION WITHIN THE BRACKETS

3.5 CONFORMITY WITH BID DOCUMENT

3.5.1. Bidder hereby certifies that it agrees to all provision of the Bid Documents, unless exceptions are specifically and clearly listed in its proposal and identified as Exceptions: **Bidder's printed terms and conditions of sale are not considered specific exceptions and will not be accepted.** Any exceptions that Bidder has taken are listed on page (list pages). [_____]

 Type Name and Title

 Signature of Bidder

 Telephone Number

 Fax Number

 E-mail Address

 Date of Bid



Oklahoma Municipal Power Authority
Charles D. Lamb Energy Center
Raw/Fire Water & Demin. Tanks



Project No. 13018-002
Specification No.: C-4412
Issue: Bid, Rev. 1
Date: April 15, 2013

ATTACHMENT 2:
PROPOSAL DATA PAGES

PROPOSAL DATA FORM

NAME OF BIDDER: _____

SCHEDULE AND DOCUMENT VERIFICATION		Bidder's Response *	If No, Bidder shall provide the alternate information or a proposal reference that explains the reason for the exception.
1. DELIVERY:			
1.1	Can the Bidder perform the Work in accordance with the delivery schedule of dates given in Section 114 of this Specification. (ANSWER YES OR NO)		
1.2	The latest date on which Bidder may accept modifications in order to meet the delivery dates. (Insert the specific date or the number of weeks prior to the delivery date)		
1.3	Delivery Source. (Provide location from where the delivery will initiate)		
2. DRAWINGS, DOCUMENTS AND DATA:			
2.1	Bidder agrees to provide all drawings, documents, procedures, design criteria, curves, lists, reports, databases, tables, specifications, data sheets, instruction books, schedules, data and other type documents and information specified in Sections 205 and 207 as required by this Specification. (ANSWER YES OR NO)		
2.2	Bidder agrees to provide work, fabrication and delivery schedules as specified in Section 114 as required by this Specification. (ANSWER YES OR NO)		

* Note: Failure to provide requested information will constitute an incomplete proposal.

PROPOSAL DATA FORM

NAME OF BIDDER: _____

	DATA TO BE PROVIDED WITH THE PROPOSAL	Bidder's Response * (Yes/No)	If No, Bidder shall provide the alternate information or a proposal reference that explains the reason for the exception.
3.	REQUIRED INFORMATION:		
3.1	Complete list of drawings that will be submitted following the Contract Award.		
3.2	Bidder Experience List		
3.3	CPM Schedule that shows the Contractor's schedule for the Work , including engineering, material procurement, manufacturing, fabrication, shipment, delivery, start-up and testing.		
3.4	Equipment Arrangement and Layout Drawings:		
a.	General arrangement, preliminary nozzle location and principal dimension drawings		
b.	Drawings that show maintenance requirements, including pull spaces, recommended lifting schemes, etc.		
c.	Drawings that show equipment laydown area requirements with component weights and overall dimensions that will be required for erection, disassembly and maintenance.		
d.	Preliminary drawings that show the floor vertical and horizontal forces and moments, static and dynamic loads and anchor bolt requirements.		
e.	Terminal and physical interface drawings and reaction tables, including allowable reaction range on each connection.		
3.5	Preliminary Tank Outline drawings, including structural foundation anchor bolts and embedment requirements, platform and stairs		
3.6	Foundation and Embedment Arrangement		
3.7	Foundation Design Criteria including loads (Not-to-Exceed Loads)		
3.8	Equipment Laydown Area		
3.9	Description of where Specification deviates from Seller's Standard Package		
3.10	Surface preparation and Coating Spec/document (include MSDS)		
3.11	Cleaning procedures		
3.12	Summary descriptions for maintenance and overhaul requirements.		
3.13	List of special tools required for installation, maintenance and/or repair.		
3.14	List of long lead procurement items.		
3.15	QA/QC Manual.		
3.16	Corrosion protection coating system, including product data sheets and MSDS.		

PROPOSAL DATA FORM

NAME OF BIDDER: _____

	DATA TO BE PROVIDED WITH THE PROPOSAL	Bidder's Response * (Yes/No)	If No, Bidder shall provide the alternate information or a proposal reference that explains the reason for the exception.
3.17	Detailed specifications covering construction and all materials used, including material thickness, where not set forth above.		
3.18	Identification of coated components and coating materials		
3.19	Bidder shall furnish the Purchaser with any additional data required when so requested.		

* Note: Failure to provide requested information will constitute an incomplete proposal.

PROPOSAL DATA FORM

NAME OF BIDDER: _____

		Unit of Measure	Bidder's Response *	Unit of Measure	Bidder's Response *
		RAW/FIRE WATER TANK		DEMIN. WATER TANK	
4.	DESIGN AND CONSTRUCTION				
4.1	Material:				
a.	ASTM Spec. No.				
b.	Grade				
4.2	Plate thickness:				
a.	Shell	in		in	
b.	End, head, top, or bottom	in		in	
c.	Corrosion/Erosion allowance	in.		in.	
4.3	Design Code				
4.4	Design Capacity	gal or ft ³		gal or ft ³	
4.5	Total Capacity	gal or ft ³		gal or ft ³	
4.6	Top Capacity Level (TCL)				
4.7	Bottom Capacity Level (BCL)				
4.8	Weight:				
a.	Net	lb		lb	
b.	Filled	lb		lb	
4.9	Dimensions:				
a.	Height (or length)	ft-in		ft-in	
b.	Diameter	ft-in		ft-in	
4.10	Design Pressure	psia		psia	
4.11	Design Temperature	°F		°F	
4.12	Roof Live Load	psf		psf	
4.13	Pipe Material (ASTM No. & Grade)				
4.14	Fittings (ASTM No. & Grade)				
4.15	Forgings (ASTM No. & Grade)				
4.16	Anchor Rods:				
a.	Quantity Required				
b.	Size				
c.	Material				

PROPOSAL DATA FORM

NAME OF BIDDER: _____

		Unit of Measure	Bidder's Response *	Unit of Measure	Bidder's Response *
		RAW/FIRE WATER TANK		DEMIN. WATER TANK	
4.17	Internal Primer				
4.18	External Primer				
5.	FORCES AND MOMENTS, RAW/FIRE WATER TANK				
5.1	Bidder shall state the maximum allowable forces and moments at nozzles that can be imposed on the tank based on 0% cold spring. Values shall be given on a, b, and c axes that form a right hand Cartesian Coordinate System and defined as follows:				
a.	a – axis Axial centerline of nozzle				
b.	c – axis Perpendicular to “a” axis, parallel to horizontal plane.				
c.	b – axis Perpendicular to “a” and “c” axes with an upward projection on the vertical axis				
	Note: If “a” axis is vertical, “b” axis shall be parallel to the longitudinal centerline of the tank.				
5.2	Suction (T-1):				
a.	Forces:				
a1.	direction	lb		lb	
a2.	direction	lb		lb	
a3.	direction	lb		lb	
b.	Moments:				
b1.	axis	ft-lb		ft-lb	
b2.	axis	ft-lb		ft-lb	
b3.	axis	ft-lb		ft-lb	

PROPOSAL DATA FORM

NAME OF BIDDER: _____

		Unit of Measure	Bidder's Response *	Unit of Measure	Bidder's Response *
		RAW/FIRE WATER TANK		DEMIN. WATER TANK	
5.3	Fill (T-2):				
a.	Forces:				
a1.	direction	lb		lb	
a2.	direction	lb		lb	
a3.	direction	lb		lb	
b.	Moments:				
b1.	axis	ft-lb		ft-lb	
b2.	axis	ft-lb		ft-lb	
b3.	axis	ft-lb		ft-lb	
5.4	Overflow (T-3):				
a.	Forces:				
a1.	direction	lb		lb	
a2.	direction	lb		lb	
a3.	direction	lb		lb	
b.	Moments:				
b1.	axis	ft-lb		ft-lb	
b2.	axis	ft-lb		ft-lb	
b3.	axis	ft-lb		ft-lb	
5.5	Drain (T-5):				
a.	Forces:				
a1.	direction	lb		lb	
a2.	direction	lb		lb	
a3.	direction	lb		lb	
b.	Moments:				
b1.	axis	ft-lb		ft-lb	
b2.	axis	ft-lb		ft-lb	
b3.	axis	ft-lb		ft-lb	
5.6	Recirc (T-8):				
a.	Forces:				

PROPOSAL DATA FORM

NAME OF BIDDER: _____

		Unit of Measure	Bidder's Response *	Unit of Measure	Bidder's Response *
		RAW/FIRE WATER TANK		DEMIN. WATER TANK	
a1.	direction	lb		lb	
a2.	direction	lb		lb	
a3.	direction	lb		lb	
b.	Moments:				
b1.	axis	ft-lb		ft-lb	
b2.	axis	ft-lb		ft-lb	
b3.	axis	ft-lb		ft-lb	
c.	May all forces and moments be applied simultaneously?	Yes/No		Yes/No	
d.	If no, Bidder shall provide interaction formula and/or interaction graphs.				

PROPOSAL DATA FORM

NAME OF BIDDER: _____

		Unit of Measure	Bidder's Response *	Unit of Measure	Bidder's Response *
		RAW/FIRE WATER TANK		DEMIN. WATER TANK	
6.	ADDITIONAL PROPOSAL DATA (Provide Data)				
6.1	Detailed specifications covering construction and materials used in the equipment. Materials shall be fully identified by Bidder by referencing the appropriate ASTM or ASME material specification number and grade or class in each case.	Yes/No		Yes/No	
6.2	Bidder shall submit a copy of his ASME Certificate of Authorization for Section VIII work, with his proposal. Bidder shall state whether this certificate is included.	Yes/No		Yes/No	

*Failure to provide requested information will constitute an incomplete proposal.

Name of Bidder: _____
 Street Address _____
 City and State _____
 Zip Code _____
 Name of contact _____
 Phone: _____
 Fax: _____
 Email: _____