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#### TRANSMITTAL COVER SHEET

DATE: AUGUST 31, 2023

- TO: ALL PLAN HOLDERS OF RECORD
- FROM: LAUREN GALLO
- PROJECT: MOUNTAIN GAP 500K GALLON GST REHABILITATION FOR ARAB WATER WORKS SRF PROJECT NO. FS010259-01 GMC PROJECT NO. CHUN180039-05
- RE: ADDENDUM NO. 1 AND ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 1

#### ACKNOWLEDGEMENT OF RECEIPT:

#### PLEASE PRINT RECIPIENT'S NAME, FIRM, AND DATE RECEIVED.

THEN <u>E-MAIL BACK TO lauren.gallo@gmcnetwork.com</u> FOR OUR RECORDS AND TO ACKNOWLEDGE YOUR RECEIPT OF THIS ADDENDUM.

NAME (PLEASE PRINT)

FIRM (PLEASE PRINT)

DATE RECEIVED (PLEASE PRINT)

If there are any problems with this transmittal, please contact sender, at the number listed above.

## GMC ADDENDUM NUMBER 1

#### MOUNTAIN GAP 500K GALLON GST REHABILITATION

FOR ARAB WATER WORKS SRF PROJECT NO. FS010259-01 GMC PROJECT NO. CHUN180039-05

#### 1. <u>Revisions to Project Manual</u>

- 1.1 The following revisions are hereby added as Addendum No. 1 to the referenced Project Manual and Plans and shall be considered when preparing bids.
- 1.2 A revised Bid Proposal Form is attached to this Addendum and shall be used when preparing your bid.
- 1.3 A revised Specification 17959 (Surface Preparation & Coating System) is attached to this Addendum and shall be used when preparing your bid.

#### 2. <u>Clarification</u>

- 2.1 Should the contractor elect to install roof couplings for internal rigging, the couplings shall be plugged with a Schedule 80 PVC plug of the appropriate size upon completion.
- 2.2 Contractors are cautioned that there is limited working room for equipment and vehicles and that smaller media blasting equipment / trailers may be required to rehabilitate the tank. Limited equipment may have to be staged adjacent to the tank site outside fence adjacent to the highway with appropriate construction signage, barrels, etc.
- 2.3 The site light located at the top of the tank adjacent to the exterior ladder shall be removed prior to rehabilitation and re-installed once rehabilitation is complete.

#### 3. <u>Questions</u>

3.1 **Question: Is there a budget estimate for this project?** Answer: \$250,000.00

#### 3.2 Question: Can you provide a recent inspection report? Photos?

Answer: A recent inspection report is not available. Per Special Specification 17999 – 1.14 / All bidders shall visit the site prior to preparing their bid. See photo below.

# GMC



### 3.3 Question: Do the current coatings contain abatement levels of heavy metals? Can you provide recent analysis?

Answer: Unknown, contractors shall take any necessary samples or measurements to prepare their bid to assure themselves that the site is satisfactory for performing all work required.

- 3.4 **Question: Who will be doing inspections? Will it be hold point or full time?** Answer: GMC / Hold point.
- 3.5 Question: Will we have access to power and water at the site while performing the project? Answer: The contractor will have access to water and limited power for the operation of small hand tools.
- 3.6 **Question: Can we work 7 days a week?** Answer: Yes, the contractor will be allowed to work 7 days a week as environmental conditions allow.
- 3.7 Question: We would like to confirm that there are no antenna or communication equipment on the tank.

Answer: To the knowledge of GMC there is not any antenna or communication equipment on the tank, however there is a small site light mounted on the tank adjacent to the ladder.

3.8 **Question: Please confirm the logo will be put on only one side?** Answer: Confirmed, the logo shall be installed in one location only. Location to be field verified by the Owner and Engineer prior to placement.



- 3.9 **Question: What year was the tank built?** Answer: 1962
- 3.10 **Question: How soon after the bid will the project be awarded?** Answer: The project is anticipated to be awarded within 30 days.
- 3.11 **Question: Will Owner pull water sample and pay for Bac-T?** Answer: No, disinfection of the tank along with obtaining water samples and paying for Bac't testing shall be the responsibility of the contractor.
- 3.12 **Question: How soon after award will the owner want the contractor onsite to begin work?** Answer: The contractor shall be prepared to begin work in the Fall / Winter of 2023.
- 3.13 Question: Has the interior of the tank ever been brush sandblasted and overcoated? If so, how many coats?

Answer: Not the knowledge of GMC. See Special Specification 17999 / 1.14 regarding site visit to obtain samples or measurements as needed for bidding.

3.14 Question: Has the interior of the tank ever been painted with 100% solids epoxy? If so, what was the film thickness?

Answer: Not to the knowledge of GMC. See Special Specification 17999 / 1.14 regarding site visit to obtain samples or measurements as needed for bidding.

#### 3.15 **Question: Can we get a list of the plan holders?** Answer: <u>https://www.gmcnetwork.com/bids/arab-mountain-gap-500k-gallon-gst-rehabilitation/</u>

3.16 Question: Will the owner be responsible for wrapping/relocating the overhead power lines to be in compliance with OSHA regulations?
 Answer: No, the contractor shall be responsible for any wrapping or relocation of power lines needed during the rehabilitation.

- 3.17 **Question: Is a site visit required prior to bidding?** Answer: No but encouraged. See special specification 17999 /Section 1.14 to make arrangements for site visit.
- 3.18 **Question: Can the tank be wet blasted with partial containment?** Answer: No, the project shall be bid as specified with full containment.
- 3.19 **Question: Could we use a faster blaster in order to avoid containment?** Answer: No, the project shall be bid as specified with full containment.
- 3.20 **Question: Please confirm steel grit and a faster blaster can be used on this project?** Answer: Due to site limitations, neither steel grit or a faster blaster will be allowed for the rehabilitation of the project.



#### 4. <u>Acknowledgement of Receipt</u>

- 4.1 Receipt of Addendum No. 1 shall be acknowledged in two ways:
  - 4.1.1 Note on Page 3 of the Bid Form Bidder acknowledges receipt of "Addendum No. 1."

#### AND

4.1.2 EMAIL Goodwyn Mills Cawood, LLC immediately at <u>lauren.gallo@gmcnetwork.com</u> & <u>patsy.stinson@gmcnetwork.com</u> and confirm that EMAIL has been received.

#### 5. <u>Conclusion</u>

5.1 This is the end of Addendum No. 1, dated Thursday, August 31, 2023.

#### **BID FORM FOR CONSTRUCTION CONTRACT**

#### **REVISED PER ADDENDUM #1**

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

#### ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Arab Water Works

526 Cullman Road

Arab, Alabama 35016

#### Attn: Catharine Willis, Chairperson

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

#### ARTICLE 2—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
  - A. Required Bid security;
  - B. List of Proposed Subcontractors;
  - C. List of Proposed Suppliers;
  - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
  - E. Contractor's license number as evidence of Bidder's State Contractor's License; and
  - F. Accounting of Sales Tax Attachment to Proposal Form.

#### ARTICLE 3—BASIS OF BID

- 3.01 Unit Price Bids
  - A. Bidder will perform the following Work at the indicated unit prices:
  - B. Bidder acknowledges that:
    - 1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

<u>ltem</u>	<u>Qty.</u>	<u>Unit</u>	Description	<u>Unit Price</u>	<b>Total Price</b>
1	1	LS	Mobilization & General Conditions (NTE 3% of Total Bid)	LS	\$
2	1	LS	Exterior Rehabilitation - (Surface Preparation & Protective Coating System) Including Above Ground Piping @ Tank	LS	\$
3	1	LS	Interior Rehabilitation - (Surface Preparation & Protective Coating System)	LS	\$
4	1	LS	Logo (One Location)	LS	\$
5	1	LS	Containment System with Bonnet	LS	\$
6	1	LS	Furnish & Install Manway Gasket Including Galvanized Bolts and Nuts	LS	\$
7	1	LS	Remove Existing Roof Vent & Install New Aluminum Roof Vent w/ Neck	LS	\$
8	1	LS	Furnish & Install New Non-Corrosive Float w/ SS Level Indicator Cables & Hardware	LS	\$
9	1	LS	Furnish & Install Aluminum Anti-Climb Ladder Gate	LS	\$
10	1	LS	Remove Existing Rail Safety Climbs & Install Cable Type Safety Climbs	LS	\$
11	1	LS	Remove and Replace Base Plate Grout	LS	\$
12	1	LS	Furnish & Install (5) 3/8" Thick, 6" x 6" Square Steel Patch Plates	LS	\$
13	1	LS	Furnish & Install 1" Frost Proof Hose Bid w/ Accessories	IS	\$
14	1	LS	- Extend Existing OF Pipe from HWL to Ground Elevation, Including Brackets, Flap Valve & SS Screen		¢
15	1	LS	- Concrete Overflow Pipe Splash Pad	LS	\$
			=		

16	1	LS	Furnish & Install Davit Arm w/ Brackets @ Ex. Shell Manway —	LS	\$
17	1	LS	Remove Existing Round Roof Hatch & Install New Roof Hatch w/ Neck (24" Square Clearing Opening) –	LS	\$ 
18	1	LS	Unidentified Repairs Allowance	LS	\$ 25,000.00
19	1	LS	Traffic Control Measures (Const. Signs, Const. Barrels, Etc.)	LS	\$ 
20	1	LS	Cleanup, Seeding, Mulching & Site Restoration	LS	\$ 

TOTAL BID \$

#### **ARTICLE 4—TIME OF COMPLETION**

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

- 5.01 Bid Acceptance Period
  - A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 5.02 Instructions to Bidders
  - A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

#### 5.03 Receipt of Addenda

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

#### **ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

- 6.01 Bidder's Representations
  - A. In submitting this Bid, Bidder represents the following:

- 1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
- 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
- 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
- 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
- 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
- 7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- 8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- 9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- 10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- 11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### 6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

- 1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
- 2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
- 3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
- 4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
  - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
  - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
  - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
  - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

#### (Signature Page Follows)

Bidder:

	(typed or printed name of organization)
By:	
	(individual's signature)
Name:	(typed or printed)
Title:	
-	(typed or printed)
Date:	(trunch or printed)
If Bidder is a	(typed or printed)
ij bluuel is t	i corporation, a partnership, or a joint ventare, attach evidence of authomy to sign.
Attest:	(individual's signature)
Name:	(individual s signature)
<u>-</u>	(typed or printed)
Title:	
5.	(typed or printed)
Date:	(typed or printed)
Address fo	r giving notices:
-	
_	
Bidder's Co	ontact:
Name:	(typed or printed)
Title:	
	(typed or printed)
Phone:	
Email:	
Address:	
-	
-	
– Bidder's Co	ontractor License No.: (if applicable)

#### SECTION 17959 - SURFACE PREPARATION AND COATING OF EXISTING POTABLE WATER STORAGE TANK (ADDENDUM No. 1)

#### PART 1 – GENERAL

- 1.1 SCOPE
  - A. This specification covers repairs, preparation of surfaces, performance and completion of painting of all surfaces specified on the following structure:
    - Mountain Gap GST- 500,000 Gallon Ground Storage Tank: Interior and Exterior • Surfaces, Approx. Height – 43' / Approx. Diameter – 46' (Erected 1962)
  - B. The Contractor shall be responsible for all costs associated with blasting debris sampling and testing, soil sampling and testing (pre-work and post-work), worker protection, environmental pollution control, handling of debris, laboratory analysis and waste disposal.

#### 1.2 WORK INCLUDED

- A. Preparation of surfaces which are to receive finishes
- B. Containment w/ bonnet
- C. Disposal of blasting debris
- D. Tank repairs
- E. Finish surfaces
- F. Testing and cleaning
- 1.3 RELATED WORK AND APPLICABLE REQUIREMENTS SPECIFIED ELSEWHERE
  - A. BIDDING REQUIREMENTS, CONTRACT FORM AND CONDITIONS OF THE CONTRACT AND GENERAL REQUIREMENTS shall apply to all work included in this Section.
- 1.4 DOCUMENTS AND STANDARDS
  - A. Coating manufacturer's printed instructions.
  - B. American Society of Testing Materials.
    - ASTM B117 Salt Spray (Fog)
      ASTM D149 Dielectric Strength

    - 3. ASTM D4060 Abrasion
    - 4. ASTM D4541 Adhesion
    - 5. ASTM D4585 Humidity
    - 6. ASTM G53 **QUV Exposure**
    - 7. ASTM D 4141 Exterior Exposure (EMMAQUA)
  - C. American National Standards Institute/National Sanitation Foundation.
    - 1. ANSI/NSF Standard 61 Listed Drinking Water System Components -Health Effects
  - D. American Water Works Association.
    - 1. AWWA Standard C652-92 **Disinfection**
    - 2. AWWA Standard D100-84 Welded Steel Tanks For Water Storage

- 3. AWWA Standard D102-17 Painting Steel Water Storage Tanks
- E. Code of Federal Regulations.
  - 1. 29 CFR 1910 Occupational Safety and Health Standards (General Industry Standards)
  - 2. 29 CFR 1910.134 Respiratory Protection
  - 3. 29 CFR 1910.1020 Access to Employee Exposure and Medical Records
  - 4. 29 CFR 1910.1200 Hazard Communication
  - 5. 29 CFR 1926 **Safety and Health Regulations for Construction** (Construction Industry Standards)
  - 6. 40 CFR 50 National Primary and Secondary Ambient Air Quality Standards
  - 7. 40 CFR 261 Identification and Listing of Hazardous Waste
  - 8. 40 CFR 268 Land Disposal Restrictions
  - 9. All other Applicable State and Federal Regulations
- F. National Institute for Occupational Health and Safety.
  - 1. All Applicable Regulations
- G. Occupational Safety and Health Administration.
  - 1. All Applicable Regulations
- H. Steel Structures Painting Council (SSPC)

Solvent Cleaning	
Hand Tool Cleaning	
Power Tool Cleaning	
Commercial Blast Clean	ing
D-63 Near White Blast Cleanir	ng
	-

#### 1.5 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Provide products from a company specializing in the manufacture of high performance coatings with a minimum of 10 years' experience.
  - 2. Applicator shall be trained in application techniques and procedures of coating materials and shall demonstrate a minimum of 5 years successful experience in such application.
    - a. Maintain, throughout duration of application, a crew of painters who are fully qualified to satisfy specified qualifications.
  - 3. Single Source Responsibility:
    - a. Materials shall be products of a single manufacturer or items standard with manufacturer of specified coating materials.
    - b. Provide secondary materials which are produced or are specifically recommended by coating system manufacturer to ensure compatibility of system.

- B. Regulatory Requirements:
  - 1. Conform to applicable codes and ordinances for flame, fuel, smoke, and volatile organic compound (VOC) ratings requirements for finishes at time of application.
- C. Pre-Installation Meeting:
  - 1. Schedule a conference and inspection to be held on-site before field application of coating systems begins.
  - 2. Conference shall be attended by Contractor, Owner's representative, Engineer, coating applicators, and a representative of coating material manufacturer.
  - 3. Topics to be discussed at meeting shall include:
    - a. A review of Contract Documents and accepted shop drawings shall be made and deviations or differences shall be resolved.
    - b. Review items such as environmental conditions, surface conditions, surface preparation, application procedures, and protection following application. A surface mock-up of the surface preparation requirements for the project, both interior and exterior, shall be prepared by the Contractor. All parties shall agree to the degree of cleanliness and the mock-up shall be preserved for the duration of the project.
    - c. Establish which areas on-site will be available for use as storage areas and working area.
  - 4. Pre-Construction conference and inspection shall serve to clarify Contract Documents, application requirements and what work should be completed before coating application can begin
  - 5. Prepare and submit, to parties in attendance, a written report of pre-installation conference. Report shall be submitted within 3 days following conference.

#### PART 2 - MATERIALS

- 2.1 QUALITY OF COATINGS
  - A. The paints and paint products of the *Tnemec Company, Inc.,* mentioned in the following specifications are set up as standards of quality. The usual "or equal" clause shall apply. No request for substitution will be considered which decreases the film thickness and/or the number of coats to be applied, or which offers a change from the generic type of coating specified. Request for substitution shall contain the following:
    - 1. FULL NAME OF EACH PRODUCT
    - 2. DESCRIPTIVE LITERATURE
    - 3. DIRECTIONS FOR USE
    - 4. GENERIC TYPE
    - 5. NON-VOLATILE CONTENT BY VOLUME
    - 6. MANUFACTURER'S WRITTEN CERTIFICATION THAT EACH PRODUCT HAS BEEN COMMERCIALLY AVAILABLE FOR A MINIMUM OF 15 YEARS.
    - 7. PERFORMANCE DATA LISTED IN SECTION 8
  - B. Bidders desiring to use paints other than those specified shall submit their proposal based on the specified materials. Submittals shall include a side by side comparison of the performance attributes of the proposed materials as compared to the specified

coatings. In no case will the request be considered unless all information is received, in writing, ten days prior to the bid opening date. In addition, the proposer shall provide a list of not less than 25 tanks, within a 100 mile radius, that have been coated with the proposed system and have rendered satisfactory service for at least five years.

#### 2.2 CERTIFICATIONS

A. Protective coatings for interior wet application shall be listed by NSF International as approved for potable water contact in accordance with ANSI/NSF Std. 61, Section 5 <u>Protective (Barrier) Materials</u>.

#### 2.3 SHIPPING, STORAGE AND HANDLING

- A. All paints shall be properly prepared by the manufacturer and delivered to the site for field painting in the original unbroken containers with manufacturer's label plainly printed thereon. Type of material to be applied at each location shall be submitted to the Engineer with the manufacturer's written recommendation of the type paint for each item to be painted.
- B. All coatings shall be stored in an enclosed structure to protect them from weather and excessive heat or cold. Flammable coatings must be stored to conform to City, County, State and Federal safety codes for flammable coatings or paint materials. At all times coatings shall be protected from freezing.

#### PART 3 – APPLICATION

#### 3.1 GENERAL

- A. Prepare surface and touch-up welds, burned and abraded areas on primed steel with specified primer before applying field coats.
- B. The painter shall mix, thin and apply each coating at the rate and manner specified by the manufacturer's printed instructions. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint.
- C. All coatings shall be applied in strict accordance with the applicable manufacturer's current printed product data sheet(s) and container labels. Coatings shall not be applied above or below the minimum and/or maximum surface temperatures as stated on the product data sheet(s) and shall not be applied to wet or damp surfaces, in rain, snow, fog or mist. Surface temperature must be at least 5°F above the dew point.
- D. Painting shall be completed well in advance of the probable time of day when condensation will occur and/or the surface temperature is expected to drop below the minimum listed on the applicable product data sheet(s).
- E. Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags or missed areas.
- F. The manufacturer's recommended curing time shall elapse before the next coat is applied. Adequate ventilation shall be provided for proper drying of paints on interior tank surfaces. A minimum of 7 days following the application of the final coat on the interior surfaces shall be allowed before the tank is flushed, disinfected or filled with water.

G. Clean-up: All cloths and waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day. Upon completion of the work, all staging, scaffolding, and containers shall be removed from the site and/or destroyed in an approved and legal manner. Paint spots, oil, or stains upon adjacent surfaces and floors shall be completely removed, and the entire job left clean and acceptable to the Engineer.

#### 3.2 EXISTING UTILITIES, STRUCTURES AND PROPERTIES

A. It shall be the responsibility of the contractor to locate and avoid damage to any and all existing water, gas, sewer, electric, telephone, and other utilities, structures, or appurtenances. The Contractor shall repair or pay for all damages caused by his operations or his personnel to existing utilities, structures, appurtenances, or properties, either below ground or above ground and shall settle in full all damage suites which may arise as a result of his operations.

#### 3.3 VENTILATION

A. It is essential that the solvent vapors released during and after application of coatings be removed from the tank. During coating application the capacity of ventilating fans shall be at least 300 cfm per gallon of coating applied per hour. Continuous forced ventilation at a rate of at least one complete air change per 4 hours shall be provided for at least 7 days after coating application is completed. Air shall be exhausted from the lowest portions of the tank with the top openings kept open and clear. A minimum of seven days (manufacturers printed instructions shall be followed for cure times at various temperatures) following application of the final coat on the interior shall be allowed before the tank is sterilized or filled with water.

#### PART 4 – PAINTERS LOG AND TESTING EQUIPMENT

- 4.1 DAILY LOG: The Contractor shall keep a daily log in which he shall record the following information:
  - A. Air Temperature: Air temperature readings shall be taken at intervals throughout the day's work. Readings shall be taken at the start of the mornings work, mid-day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.
  - B. Surface Temperature: Surface temperatures shall be taken in areas where work is being performed. Surface temperature shall be that as specified by the coatings manufacturer.
  - C. Material Temperature: Material temperature reading shall be taken prior to the application of the paint.
  - D. Relative Humidity: Relative humidity readings shall be taken at intervals throughout the day's work. Readings shall be taken at the start of the mornings work, mid-day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.
  - E. Dew Point: Dew point readings shall be taken at intervals throughout the day's work. Readings shall be taken at the start of the mornings work, mid-day and afternoon.

Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.

- F. Blast Profile: Following blasting operations, the Contractor shall take and record the depth of the blast profile. Blast profile measurements shall be taken using Testex X Course Replica Tape. Replica Tape shall be included in the daily log.
- G. Detail of Work Performed During the Day: Area where work was performed and the extent of the work performed shall be included in the daily log.
- 4.2 TESTING EQUIPMENT
  - A. In addition to the equipment required to take measurements which will be included in the daily log, The Contractor shall have on the project site the following testing equipment. Equipment shall be in calibration and proper working order.
    - 1. Dry Film Thickness Measurements Gauge: Dry film thickness reading shall be taken with a properly calibrated (per the manufacturer's instructions) Type 1 (magnetic) or Type 2 (electromagnetic) instrument. Dry film thickness reading will be taken and recorded in the in a frequency and manner as dictated by the Engineer.
    - 2. Low Voltage Holiday Detection Equipment: Interior surfaces, following a minimum of 96 hours cure, shall be holiday detected in accordance with ASTM G 62 low voltage holiday detection. Holiday detector shall be a Tinker & Rasor Model M-1 or equal. Areas found to have holidays shall be marked and repaired in accordance with the paint manufacturer's instructions. The Engineer shall be notified of time of testing so that he may be present to witness the testing.

#### PART 5 – SURFACE PREPARATION & PAINTING

#### 5.1 EXTERIOR SURFACE PREPARATION

A. Prior to surface preparation, all surfaces shall be cleaned of all oil and grease in accordance with SSPC-SP 1 Solvent Cleaning. All exterior surfaces shall be abrasive blasted to remove all paint, rust and scale, as well as all other foreign matter and shall result in a surface preparation equal to that of SSPC-SP 10 Near White Blast Cleaned Surface. Surface profile shall be 1.5 - 2.5 mils. Contractor shall take necessary precautions to prevent nuisance dust from interfering with adjacent properties.

#### 5.2 INTERIOR SURFACE PREPARATION

A. Prior to surface preparation, all surfaces shall be cleaned of all oil and grease in accordance with SSPC-SP 1 Solvent Cleaning. All interior surfaces shall be abrasive blasted to remove all paint, rust and scale, as well as all other foreign matter and shall result in a surface preparation equal to that of SSPC-SP 10 Near White Blast Cleaned Surface. Surface profile shall be 1.5 - 2.5 mils.

#### 5.3 DEBRIS CONTAINMENT AND DISPOSAL DURING PAINT REMOVAL OPERATIONS

A. The Contractor will be required to contain all blasting debris as well as paint overspray and/or roller spatter, generated during the performance of the work. During surface preparation, airborne particulate and debris from the removal of the paint shall not be permitted to contaminate the air, soil or water surrounding the work site. The Contractor will be required to perform any site remediation required due to improper collection and disposal of paint removal debris. The Contractor shall develop a debris containment and disposal plan in accordance with these specifications and federal and state requirements. The Contractor shall submit their plan to the Engineer for written approval prior to starting work.

- B. Containment System: The Contractor shall install a containment system prior to any media blasting meeting the requirements of Class 3A w/ Bonnet as specified in the SSPC Guide 6 (95) "Guide for Containing Debris Generated During Paint Removal Operations". Assessment of the containment system will be conducted in accordance with SSPC Guide 6 Section 5.5. All testing required will be paid by the Contractor. The standards and references listed in Section 3A of SSPC Guide 6 (95) shall form and be part of these specifications. The Contractors shall utilize SSPC Guide 6 for the development of the containment system. All workers shall be protected in accordance with all applicable OSHA Standards.
- C. Disposal of Debris: Until testing demonstrates otherwise, all debris collected by the containment system will be considered a hazardous waste and shall be handled and disposed of in accordance with federal and state regulations. SSPC Guide 7 "Guide for Disposal of Lead Contaminated Surface Preparation Debris" shall be considered as part of this specification. The Contractor shall pay for all testing required to determine if the collected material is hazardous.
- 5.4 DISPOSAL OF DEBRIS
  - A. All debris shall be properly disposed of in a landfill off site.

#### 5.5 COATING SYSTEM

- A. Following surface preparation, all interior and exterior surfaces shall be coated as hereinafter specified. The primer shall be applied in accordance with the recommendations of the manufacturer and not more than eight hours after surface preparation.
- B. Exterior Surfaces:
  - 1. <u>Prime</u>: All surfaces shall receive one full prime coat of *Themec Series 91 H20 Hydro-Zinc* applied at a rate to achieve 2.5 – 3.5 mils DFT.
  - Intermediate: After the stripe coat has been properly installed, all exterior surfaces shall receive one intermediate coat of *Tnemec Series 1075 Endura Shield* II applied at a rate of 3.0 – 5.0 DFT. The intermediate coat shall be applied by brush or roller. Should the Contractor elect to spray the intermediate coat then a stripe coat of Series 20-1255 Pota-Pox shall be applied to all weld seams, ladders and other difficult to coat surfaces as a subsidiary obligation of the Intermediate Coat.
  - <u>Finish</u>: Following the intermediate coat, all exterior surfaces shall receive one full finish coat of *Tnemec Series 700 HydroFlon* applied at a rate to achieve 2.0 – 3.0 mils DFT. (Tnemec White 00WH)
  - Lettering/Logos/Markings: All lettering, markings and/or logos shall be applied utilizing two coats of *Tnemec Series 700 HydroFlon* applied at a rate to achieve 2.0 3.0 mils DFT per coat. Logo height shall be a minimum of 25'. (See Appendix B) One Location.

- 5. <u>Concrete Foundations</u>: All concrete foundation surfaces shall receive two coats of *Tnemec Series 156 Enviro-Crete* applied at a rate of 4.0 6.0 mils DFT per coat.
- 6. THE EXTERIOR COATING SYSTEM SHALL HAVE A MINIMUM DRY FILM THICKNESS OF 7.5 MILS DFT.
- C. Interior Surfaces:
  - <u>Prime</u>: All interior surfaces shall receive one full prime coat of *Tnemec Series 91* H20 Hydro-Zinc or 94 H20 Hydro-Zinc applied at a rate to achieve 2.5 – 3.5 mils DFT.
  - 2. <u>Seam Treatment</u>: Following the prime coat, all weld seams, ladders, sharp edges, and any other difficult to coat areas shall receive one coat of *Tnemec Series 21-1255 Epoxoline* applied, *by brush*, at a rate to achieve 2.0 4.0 mils DFT.
  - 3. <u>Pit Filler</u>: All pits requiring filler shall be filled with *Tnemec Series 215 Surfacing Epoxy*. Contractor shall include five gallons of pit filler in the base bid price (material and application).
  - Intermediate: All interior surfaces shall receive one intermediate coat, applied by roller, of *Tnemec Series 21-1255 Epoxoline* applied at a rate to achieve 4.0 – 6.0 mils DFT.
  - 5. <u>Finish</u>: After proper cure of the intermediate coat, all interior surfaces shall receive one full finish coat of *Tnemec Series Series 21-WH16 Epoxoline* applied at a rate to achieve 10.0 12.0 mils DFT.
  - 6. <u>Caulk</u>: Caulk all skip welded areas, lap seams, roof beams and other difficult to coat areas using *Sikaflex 1A*. Caulk joint intersection of shell wall and roof assembly.
  - 7. THE INTERIOR COATING SYSTEMS SHALL HAVE A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 16.5 MILS DFT.

#### PART 6 – TANK REPAIRS

## 6.1 MOUNTAIN GAP GST – MISCELLANEOUS REPAIRS (All repairs which require welding shall be completed prior to any media blasting taking place.)

- A. Furnish and install, One (1) new manway gasket with new galvanized nuts and bolts.
- B. Remove the existing roof vent, furnish and install a new vent neck and appropriately sized aluminum vent with # 20 mesh SS screen.
- C. Furnish & install new level indicator components, including a new non-corrosive float with stainless-steel level indicator / guide cables and stainless-steel hardware.
- D. Furnish and install a new aluminum anti-climb ladder gate.
- E. Remove existing rail type safety climb devices, furnish and install new cable type safety climb devices on all ladders.
- F. Remove existing base plate / foundation grout and re-install non-shrink grout prior to installing the coating on the foundation.
- G. Furnish and install Five (5) 3/8" thick, 6" X 6" square patch plates. Patch plates shall be fully seal welded in the interior of the tank.
- H. Furnish and install a 1" coupling in the shell wall with a Morrison Brothers Model

FIG128 frost proof hose bid for sampling as directed. (3' above foundation elevation)

- I. Furnish and install, approx. 40 LF of 12" Schedule 10 carbon steel overflow discharge pipe along with (2) 3/8" thick x 3" angle iron support brackets every 10', associated fittings, flap valve and SS mesh screen.
- J. Install concrete overflow pipe discharge pipe splash pad as detailed in Appendix C.
- K. Furnish and install a davit arm with brackets and hardware on the existing shell wall manway.
- L. Remove existing round roof hatch and neck and install a new 24" clear opening square roof hatch with handle, safety opening chain, neck and locking hasp.

#### PART 7 – ACCEPTANCE OF WORK

- A. Damaged coatings, pinholes, and holidays shall have edges feathered and repaired in accordance with the recommendations of the manufacturer, as approved by the Engineer.
- B. All finish coats, including touch up and damage-repair coats shall be applied in a manner which will present a uniform texture and color-match appearance.
- C. If the item has an improper finish, color, or insufficient film thickness, the surface shall be cleaned and top coated with the specified material to obtain the specified color and coverage. Specific surface preparation information to be secured from the coatings manufacturer and the Engineer.
- D. All visible areas of chipped, peeled, or abraded paint shall be hand or power-sanded, feathering the edges. The areas shall then be primed and finish coated in accordance with the specifications.
- E. Work shall be free of runs, bridges, shiners, laps, or other imperfections. Evidence of these conditions shall be cause for rejection.
- F. Any defects in the coating system shall be repaired by the Contractor per written recommendations of the coating manufacturer.

#### PART 8 – GUARANTEE AND ANNIVERSARY INSPECTION

- A. All work shall be warranted for a period of **Two (2)** years from the date of completion.
- B. The Owner will notify the Contractor at least 30 days prior to the anniversary date and shall establish a date for the inspection. The tank will be drained and the Owner's representative and the Contractor shall thoroughly inspect all surfaces both inside and out. Any defects in the coating system shall be repaired by the Contractor at no additional cost to the Owner. Should a failure occur to 25% of the painted surface, either interior or exterior, the entire surface shall be cleaned and painted in accordance with these specifications.

#### PART 9 – PRODUCT PERFORMANCE CRITERIA

A. Provide the following product information and manufacturers published performance data should coatings or coating system be submitted in lieu of the standard of quality established in the project documents. Should the data not be available in a published format, or if the duration of the test does not meet the specified requirement, please

respond in the appropriate space with NT (Not Tested).

- B. Organic Zinc Rich Urethane Primer (Interior & Exterior Primer)
  - a. Generic Type: Organic Zinc Rich Urethane Primer
  - b. Special Qualifications: Certified by NSF International in accordance with NSF/ANSI/CAN Std. 61 and the extraction requirements of NSF/ANSI/CAN 600 and is qualified for use on interior potable water tanks.
  - c. Solids By Volume: 63%
  - d. Zinc Content: 83% by weight
  - e. Test Criteria:

Test Criteria	Test Duration	Proposed Product Test Results
ASTM B 117	50,000 hours	Rust @ Scribe:
Salt Spray (Fog)	(Scribed Panel)	Plane Rust:
		Blisters:
ASTM G 85	15,000 Hours	Rust @ Scribe:
Prohesion		Plane Rust:
		Blisters:
ASTM D 4585	4,000 hours	Rusting:
Humidity		Blistering:
ASTM 4541	Average of Three	Adhesion PSI:
Adhesion	Tests	
ASTM G8	30 Days Exposure	
Cathodic Disbondment		
Immersion Service	7 years – No Failure	
(Potable Water)		

- C. Exterior Intermediate Coat
  - a. Generic Type: Aliphatic Acrylic Polyurethane
  - b. Solids By Volume: 71%.
  - c. Test Criteria:

Test Criteria	Test Duration	Proposed Product Test Results
ASTM B 117	9,000 hours	Rust @ Scribe:
Salt Spray (Fog)	(Scribed Panel)	Plane Rust:
		Blisters:
ASTM G 85	10,000 Hours	Rust @ Scribe:
Prohesion		Plane Rust:
		Blisters:
ASTM D 4585	4,000 hours	Rusting:
Humidity		Blistering:
ASTM D 4060	CS-17 Wheel	Report mg Loss / Average of
Abrasion	1,000 Gram Load	three tests
	1,000 Cycles	
ASTM 4541	Average of Three	Report PSI

Adhesion	Tests	
ASTM D 522	Method A	% Elongation:
Flexibility	Conical Mandrel	-
ASTM D 522	Method B	% Gloss Retention:
Flexibility	Cylindrical Mandrel	Color Change:
ASTM D 4141, Method	500 MJ/m2	Rust @ Scribe:
C (EMMAQUA)		Rust @ Edges:
ASTM D 2794	Direct Impact	Report in/lbs:
Impact		

- D. NSF Approved Epoxy (Interior Intermediate and Finish)
  - a. Generic Type: Phanalkamine Epoxy
  - b. Special Qualifications: Certified by NSF International in accordance with NSF/ANSI/CAN Std. 61 and the extraction requirements of NSF/ANSI/CAN 600 and is qualified for use on interior potable water tanks. Meets the requirements set forth in AWWA C210-15 testing.
  - c. Solids By Volume: 82%.
  - d. Test Criteria:

Test Criteria	Test Duration	Proposed Product Test
		Results
ASTM B 117	10,000 hours	Rust @ Scribe:
Salt Spray (Fog)	(Scribed Panel)	Plane Rust:
		Blisters:
ASTM D 5894	9,744 Hours	Rust @ Scribe:
Cyclic Salt Fog/UV		Plane Rust:
		Blisters:
ASTM G 85	10,000 Hours	Rust @ Scribe:
Prohesion		Plane Rust:
		Blisters:
ASTM D 4585	2,000 hours	Rusting:
Humidity		Blistering:
ASTM D 4060	CS-17 Wheel	Report mg Loss / Average of
Abrasion	1,000 Gram Load	three tests
	1,000 Cycles	
ASTM D 4541	Average of Three	Adhesion PSI:
Adhesion	Tests	
ASTM D 149	Average of 5 Test	Volts Per Mil:
Dialectric Strength		
ASTM D 1653	Average of 3 Test	Water Vapor Permeance
Water Vapor		
Transmission		

#### E. Exterior Finish Coat

- a. Generic Type: Fluoropolymer Polyurethane
- b. Solids By Volume: 60%.
- c. Test Criteria:

Test Criteria	Test Duration	Proposed Product Test Results
ASTM B 117	10,000 hours	Plane Rust:
Salt Spray (Fog)		Blisters:
ASTM D 4585	3,000 hours	Rusting:
Humidity		Blistering:
ASTM D 4060	CS-17 Wheel	Report mg Loss / Average of
Abrasion	1,000 Gram Load 1,000 Cycles	three tests
ASTM 4541	Average of Three	Report PSI
Adnesion	I ests	
ASTM D 4587	16,000 hours	Gloss Retention:
QUV Exposure		
Cycle 4: 8 nours UV		
- 4 hours		
	25.000 bours	Gloss Potention:
	25,000 110015	Color Change: DED EMCII
Cycle 4: 8 hours UV		Color Change. DED I Mon
-4 hours		
condensation		
ASTM D 4141	1,500MJ/m2	Gloss Retention:
(EMMAQUA)	Exposure	Color Change:
Exterior Exposure		
ASTM D 4141	2.000M.l/m2	Gloss Retention:
(EMMAQUA)	Exposure	Color Change:
Exterior Exposure	Expectate	
ASTM D 4141	5,000MJ/m2	Gloss Retention:
(EMMAQUA)	Exposure	Color Change:
Exterior Exposure		
ASTM D 522	Method A	Cracking:
Flexibility	Conical Mandrel	% Elongation:
ASTM 2794	Average of Three	Direct Impact:
Impact	Trials	
ASTMD 6695	3,000 hours	% Gloss Retention:
Xenon Arc		Color Change: DED
Weathering		
ASTM D 6695	8,000 hours	% Gloss Retention:

Xenon Arc Weathering		Color Change: DED
ASTM G 153	5,500 hours	% Gloss Retention:
Carbon Arc		Color Change: DED
Weathering		
AAMA 2605	10 Years Exposure	Report:
		Color Retention:
		Gloss Retention:
		Chalking:
		Erosion:

END OF SECTION