

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0004	3. EFFECTIVE DATE 16-Aug-2016	4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable)
6. ISSUED BY COMMANDING OFFICER - NAVFAC MARIANAS IPT MILCON PSC 455, BOX 195 FPO AP 96540-2937	CODE N40192	7. ADMINISTERED BY (If other than item 6) See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. N40192-16-R-1305	
		X	9B. DATED (SEE ITEM 11) 24-Jun-2016	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) FY16 MILCON P-635, Municipal Solid Waste Landfill Closure, Andersen Air Force Base, Guam See Continuation Page.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
		TEL:	EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 16-Aug-2016

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION SF 30 - BLOCK 14 CONTINUATION PAGE

The following have been added by full text:

AMENDMENT 0004

- A. In accordance with FAR 52.252-3 Alterations in Solicitation (APR 1984), portions of this solicitation are altered as follows:
 - 1. Replace the following specification sections in RFP Part B in their entirety with the specification sections provided herein as Enclosure (1). Revisions applicable to this amendment are marked and/or underlined:
 - a. SECTION 09 96 72 RECOATING EXISTING STEEL WATER TANK
 - b. SECTION 09 96 74 COATINGS FOR STEEL WATER TANK
- B. Notice 4 is provided in response to requests for information and is provided herein as Enclosure (2). Notice 4 is provided for INFORMATION ONLY. The solicitation remains unchanged unless it is amended in writing.
- C. The date for receipt of proposals remains unchanged at August 23, 2016 at 4:30pm local time.
- D. Offerors shall acknowledge this amendment in Block 19 of the Standard Form 1442 with their proposals.

(End of Summary of Changes)

SECTION 09 96 72

RECOATING EXISTING STEEL WATER TANK

PART 1 - GENERAL

1.1 DESCRIPTION

This section describes the application and inspection of the protective coatings to be utilized on the interior and exterior surfaces of the Owner's existing 250,000-gallon steel water tank. Clean and coat steel water tank in accordance with Section 099674.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Coating for Steel Water Tank (Epoxy): 099674.

1.3 SUBMITTALS

- A. Provide submittals in accordance with Section 013300 and Section 1.05 of this specification for the following:
 - 1. Written respirator program.
 - 2. Confined space certifications.
 - 3. GISO 5158 and 5159 training records.

1.4 REFERENCE DOCUMENTS

The following guidelines, documents, and references are to assist the Contractor in performing its duties for cleaning, surface preparation, and application of the coating systems. The documents listed form a part of this specification to the extent referenced.

- A. Quality Control: The following references provide the means of maintaining quality control of the blasting and coating systems:
 - 1. Steel Structures Painting Council (SSPC), Surface Preparation Specifications, Publication No. 98-01.
 - 2. SSPC-PA Series (Paint Application Guides).
 - 3. NACE, RPO287-02, Field Measurement of Surface Abrasive Blast Cleaned Surfaces Using a Replica Tape.
 - 4. ASTM D4138, Standard Method of Measurement of Dry Film Thickness of Protective Coating Systems by Destructive Means.
 - 5. ASTM D4285, Standard Test Method for Indicating Oil or Water in Compressed Air.

6. ASTM D4414, Standard Practice for Measurement of Wet Film Thickness by Notch Gages.
7. U.S. Weather Bureau psychometric tables.

1.5 WORKER PROTECTION

- A. Conform to federal, state, county, city, and Owner safety and environmental protection codes and regulations. Do not create conditions for which the Owner is subject to citations by any regulatory agency. Should the Owner be cited for a condition under the control of the Contractor, the Contractor will be responsible for payment and settlement of said citation. Provide safety equipment, including that for confined space entry and safety equipment necessary for use by the Owner's Representative.
- B. Comply with applicable regulations for properly storing, handling, transporting, and disposing of any hazardous waste.
- C. Provide at least one working telephone on the jobsite at all times.
- D. Maintain a full-time standby hole watch in case of an emergency. This employee shall be certified in CPR, have confined space certification, and be able to comply with GISO 5157 (Operating Procedures and Employee Training) and GISO 5158 (Pre-Entry). This employee shall also be fully equipped to operate within the directives of GISO 5159 (Confined Space Operations). This person shall have his own personal safety equipment and operating telephone (not the jobsite telephone).
- E. During the interior abrasive blasting operations, blast operators shall wear National Institute of Occupational Safety and Health (NIOSH) approved air-supplied helmets. The air compressor used to supply breathing air shall conform to OSHA regulations on carbon monoxide and high-temperature protection and meet Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1 (ANSI S86.1). Breathing air shall also be free of dust, fumes, vapors, or gases that may result in harmful exposure. Other persons who are exposed to blasting dust shall wear approved filter-type respirators and safety goggles. When coatings are applied in confined areas, persons exposed to toxic vapors and dust shall wear NIOSH-approved air-supplied masks.
- F. Prepare a written respirator program per OSHA regulations. The elements of a respirator protection program are summarized, but not limited to, the following:
 1. Written standard operating procedures for selection and use;
 2. Employee instructions and training in the use and limitations of respirators;
 3. Regular cleaning and disinfection;
 4. Sanitary storage of respirators; and

5. Regular inspection of respirators to assure that they are in good repair.

G. Blasting and spraying hoses shall be grounded to prevent accumulation of charges of static electricity.

H. Provide explosionproof artificial lighting for all work-confined spaces. Light bulbs shall be guarded to prevent breakage. Lighting fixtures and flexible cords shall comply with the requirements of NEPA 70 NEC for the atmosphere in which they will be used.

I. Coating materials may be irritating to the skin and eyes. When handling and mixing coatings, workers shall wear gloves and eye shields.

1.6 PRECONSTRUCTION CONFERENCE

See Section 099674.

1.7 QUALIFICATIONS

A. See Section 099674.

B. Require the coating applicator to provide a supervisor at the worksite during cleaning and coating operations. The supervisor shall have the authority to sign change orders, coordinate work, and make decisions. Provide skilled craftsmen qualified to perform the required work.

1.8 INSPECTION

A. The Owner's Representative will provide coating inspection. The Owner's Representative will provide test equipment, except for the low-voltage holiday detector. The Contractor shall conduct the low-voltage holiday test in the presence of the Owner's Representative.

B. The Owner's Representative will perform inspection on all phases of the surface preparation, abrasive blast cleaning, and application of the coating systems. See Section 099674 for additional requirements.

1.9 EXISTING RESERVOIR COATING SYSTEMS

~~A. The existing reservoir has the following coatings:~~

~~B.A.~~ Work will consist of surface cleaning and overcoating with a coating as specified in Section 099674. The exterior is coated with an alkyd epoxy. Remove and replace the existing coating with a coating as specified in Section 099674.

1.10 FINAL SELECTION OF EXTERIOR COLORS

Color of finish coat shall match the existing color as closely as possible.

PART 2 - MATERIALS

2.1 COATING SYSTEMS

See Section 099674.

2.2 INTERIOR COATING SYSTEM

See Section 099674.

2.3 EXTERIOR OVERCOATING SYSTEM

See Section 099674.

PART 3 - EXECUTION

3.1 DELIVERY AND STORAGE OF COATING MATERIALS

See Section 099674.

3.2 PROTECTION OF THE WORK

See Section 099674.

3.3 CONDITION OF EQUIPMENT

See Section 099674.

3.4 VENTILATION OF TANK INTERIOR

See Section 099674.

3.5 HUMIDITY AND TEMPERATURE CONTROL

See Section 099674.

3.6 INTERIOR SURFACE PREPARATION

- A. Remove accumulated sand and silt from the bottom of the tank.
- B. Abrasion blast clean interior surfaces per SSPC SP-10. The surface profile shall be 1.5 to 2.5 mils.

3.7 EXTERIOR SURFACE PREPARATION

- A. Clean the exterior of the tank roof and shell using stiff brushes with clean potable water that has been mixed with ICI Devoe Devprep 88 Biodegradable Water Based Cleaner, or equal. After the surfaces have been cleaned, rinse with clean potable water and allow to dry thoroughly prior to painting.
- B. Prepare damaged exterior painted surfaces on the roof and shell according to ~~SSPC SP-2 or SSPC SP-3~~SSPC SP-10, either by hand sanding or power tool cleaning.

3.8 LIMITATIONS ON ABRASIVE BLAST CLEANING

See Section 099674. Changed humidity or a delay, such as equipment failure, may cause a cleaned surface to color or slightly oxidize from condensation before the coating can be applied. In the event that a surface colors or becomes moist, blast clean it again before applying the coating.

3.9 ABRASIVE BLAST CLEANING

See Section 099674.

3.10 LIMITATIONS ON THE APPLICATION OF COATINGS

A. See Section 099674.

B. If a change in climatic conditions damages a coating application, repair the damaged coatings to its specified condition. The Contractor is responsible for damaged coatings.

3.11 PROCEDURES FOR THE APPLICATION OF COATINGS

See Section 099674.

3.12 APPLICATION OF INTERIOR EPOXY COATING SYSTEM

A. Each coat of material shall be a contrasting color. The last coat shall be white.

B. Apply two coats of epoxy on the floor, each having a dry-film thickness of 20 mils. For all other interior surfaces, apply three coats of epoxy, each having a dry-film thickness of 5 to 6 mils.

C. After application of the final coat and before it has fully cured, the Owner's Representative will determine if the seam between the roof and shell is to be caulked. As directed by the Owner's Representative, the Contractor shall caulk this seam with Sika-Flex 1A or equal.

D. After the Owner's Representative has released the interior coating system for final curing, continue to operate the dehumidification equipment for a minimum of one week. Actual curing time will be determined by the surface temperature and relative humidity and as stated in the manufacturer's technical data sheets or in writing by an authorized representative of the manufacturer.

~~3.123.13~~ APPLICATION OF EXTERIOR OVERCOATING SYSTEM

A. Spot prime by brush the cleaned damaged areas of the tank roof and shell and stripe all of the seams. Thickness shall be in accordance with Section 099674.

B. Apply a full coat of primer to the entire tank roof and shell surfaces. Dry-film thickness shall be in accordance with Section 099674.

C. Apply a finish coat to the entire roof and shell to a thickness in accordance with Section 099674. Questionable areas will be measured by

the Owner's Representative using a Tooke Gauge. Contractor is responsible for sanding and repair of coating damaged by the Tooke Gauge.

- D. Allow 24 hours' drying time between coats or until each coat has dried.
- E. Use a wet-film gauge to monitor the application of each coat of paint, according to ASTM D4414.

~~3.13~~3.14 INSPECTION

FACILITIES See

Section 099674.

~~3.14~~3.15 INSPECTION AND TESTING

- A. See Section 099674.
- B. The Owner's Representative will provide all test equipment as specified in Section 099674, except for the nondestructive low-voltage holiday detector.

SECTION 09 96 74

COATINGS FOR STEEL WATER TANK

PART 1 - GENERAL

1.1 DESCRIPTION

~~This section describes the materials, applications, and inspection of the protective coatings to be utilized on exterior surfaces of the steel water tank. Clean and coat steel water tank in accordance with AWWA D102 and the following. Use an inorganic zinc primer/epoxy intermediate/polyurethane finish. Apply protective coatings in the field as indicated.~~
This section describes the materials, applications, and inspection of the protective coatings to be utilized on the interior and exterior surfaces of the steel water tank. Clean and coat steel water tank in accordance with AWWA D102 and the following. Use a two-component epoxy on interior surfaces. Use an inorganic zinc primer/epoxy intermediate/polyurethane finish for the exterior surface. Apply protective coatings in the field as indicated.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Recoating Existing Steel Water Tank: 099672

1.3 SUBMITTALS

- A. Submit coating manufacturer's catalog data on formulation and recommended use in accordance with Section 013300.
- B. Submit coating manufacturer's surface preparation recommendations including maximum height of surface profile on abrasive blast cleaned steel.
- C. Submit coating manufacturer's application instructions, equipment, temperature and humidity limitations, drying time, and recoat cycle time.
- D. Submit coating manufacturer's recommended minimum and maximum time intervals between the application of field-applied primers and the field-applied touch-up or intermediate coats.
- E. Submit two color chip samples illustrating available colors for the finish coats of the exterior coating system.
- F. Submit manufacturer's safety data sheets on painting and coating products.
- G. Submit the name of the company and abrasive to be used, the generic type of abrasive, and product data sheets.

1.4 PRECONSTRUCTION CONFERENCE

At least 14 days prior to field application of the coating systems to the steel tank, schedule and arrange a conference with the Owner's Representative, tank manufacturer, coating applicator, and the coating manufacturer to coordinate the following:

- A. Tank manufacturer's work schedule for inspection coordination.

- B. Surface preparation methods.
- C. Specification compliance of blast abrasives and surface profile.
- D. Schedule of blast cleaning and coating application.
- E. List of equipment for cleaning and coating applications.
- F. Weather limitations for acceptable work.
- G. Inspection facilities.

1.5 QUALIFICATIONS

The Contractor shall require the coating applicator to hold a valid license recognized in Guam for performing abrasive blast cleaning and coating/painting work. The Contractor's coating applicator shall have a minimum of five years' experience and successful history in the application of the specified products to surfaces of steel tanks.

1.6 INSPECTION

- A. The Owner's Representative will provide a coating inspector. Test equipment will be provided by the Owner and will be operated by the Owner's Representative assigned to the project.
- B. The Owner's Representative will perform inspection on all off-site phases of the surface preparation, abrasive blast cleaning, and application of the coating systems.

PART 2 - MATERIALS

2.1 COATING SYSTEMS

- A. All materials of a specified system including primer, touch-up, intermediate, and finish coats shall be provided by the same manufacturer. Thinners, cleaners, driers, and other additives shall be as recommended by the coating manufacturer for the specified system.

B. Coating materials, including additives to be used on interior tank surfaces, shall not contain trichloroethylene (TCE) or tetrachloroethylene (PCE) volatile organic constituents.

~~B-C.~~ No request for product substitution will be considered which decreases the dry-film thickness designated, the number of coats to be applied, or which changes the generic type of coating specified.

~~C-D.~~ Requests for substitution shall contain the full name of each product, descriptive literature, complete data on past performance, manufacturer's instruction for use, generic type, its nonvolatile content by volume, and complete product information as outlined in AWWA D102. This information shall demonstrate equivalence of product and performance to the specified materials. No coating materials shall be procured or delivered to the project site prior to the review of the proposed material by the Owner's Representative.

2.2 INTERIOR EPOXY COATING SYSTEM

- A. Primer: Field applied, two-component epoxy with minimum volume solids of 50%. Products: PPG Amercoat 395 (white), Carboline Carboguard 561 or 891 (off-white), Tnemec 20 or 140-1211 80 or 100 (red), Devoe 133 or 233H, or Sherwin-Williams Tank Clad HS B62-80 (white).
- B. Intermediate: Field-applied, two-component epoxy with minimum volume solids of 50%. Products: PPG Amercoat 395 (off-white), Carboline Carboguard 561 or 891 (off-white or buff), Tnemec 20 or 140-1255 80 or 100 (beige), Devoe 133 or 233H, or Sherwin-Williams Tank Clad HS B62-80 (blue).
- C. Finish: Field-applied, two-component epoxy with minimum volume solids of 50%. Products: PPG Amercoat 395 (ivory), Carboline Carboguard 561 or 891 (white), Tnemec 20 or 140-A1990 80 or 100 (white), Devoe 133 or 233H, or Sherwin-Williams Tank Clad B62-80 (white).

~~2.2.3~~ EXTERIOR COATING SYSTEM ON ROOF AND KNUCKLE PLATES AND SHELL PLATES

- ~~A.~~ D. Primer (Roof and Knuckle Plates Only): Field-applied, self-curing, solvent-based two-component inorganic zinc coating with minimum zinc content of 12 pounds per gallon. Products: PPG Dimetcote 9 HS, Carboline 11 or 11HS, Tnemec 90-96, Devoe Catha-Coat 304 or 304V, or Sherwin-Williams Zinc-Clad II Plus.
- ~~B.~~ E. Shell plates: Field prime with epoxy.
- ~~C.~~ F. Touch-Up of Roof and Knuckle Plates and Field Primer for Shell Plates: Field-applied epoxy with minimum volume solids of 58%. Products: PPG Amercoat 385 or 395, Carboline Carboguard 891 or 893SG, Tnemec 104, Devoe Devran 224 HS, or Sherwin-Williams Macropoxy 646 B58-600.
- ~~D.~~ G. Intermediate: Field-applied epoxy with minimum volume solids of 58%. Products: PPG Amercoat 385 or 395, Carboline Carboguard 891 or 893SG, Tnemec 104, Devoe Devran 224 HS, or Sherwin-Williams Macropoxy 646 B58-600.
- ~~E.~~ H. Finish: Field-applied polyurethane having a minimum volume solids of 52%. Product: PPG Amercoat 450 HS, Carboline 133HB or 134HG, Tnemec Series 1075, Devoe Devthane 379, or Sherwin-Williams Hi-Solids Polyurethane B65-300.

~~2.3.4~~ ORGANIC ZINC PRIMER FOR FIELD TOUCH-UP AND SHOP COATING

- A. The organic zinc primer described below may be substituted for the specified inorganic zinc primers.
- B. Type: Organic zinc primer having a minimum zinc content of 14 pounds per gallon.
- C. Service Conditions: For use as a shop-applied primer or field touch-up primer over inorganic zinc prime coatings on exposed metal.
- D. Surface Preparation: SSPC SP-10.
- E. Coating: Coating shall be of the two- or three-component converted epoxy, epoxy phenolic, or urethane type. Products: Tnemec 90-97, International Interzinc 308, PPG Amercoat 68 HS, Devoe 313, Carboline

859, Sherwin-Williams Zinc-Clad III HS, or equal; applied to a minimum dry-film thickness of 3 mils.

PART 3 - EXECUTION

3.1 DELIVERY AND STORAGE OF COATING MATERIALS

- A. Deliver coating materials to the job in original sealed containers identified with labels indicating manufacturer; product name and number; color, batch, or lot number; and date of manufacture. Note the date of manufacture and apply coatings prior to the expiration of the guaranteed storage life. Coating materials exceeding storage life will be rejected.
- B. Store coating materials in enclosed structures to protect from weather and excessive heat or cold. Conform to state and local requirements for flammable materials.

3.2 PROTECTION OF THE WORK

- A. Protect adjacent work and surfaces not to be coated from blast cleaning, overspray, spattering, and spillage. Use protective coverings or drop cloths. Where protection is required or provided for coated surface, maintain until the coating has properly cured. Do not handle, work on, or disturb these areas until the coating is completely dry and hard.
- B. Protect surfaces coated with coal-tar base paint systems from exposure to direct sunlight at all times.

3.3 CONDITION OF EQUIPMENT

Use coating equipment designed for the application of the specified materials. Use compressors with traps and filters to remove water and oils from the air.

3.4 VENTILATION OF TANK INTERIOR

Use forced-air ventilation at all times and after the application of the interior coating systems. It is essential that the solvent vapors released during the application and from the deposited film be removed from the tank interior. During the coating application, provide a ventilating system with a capacity of at least 300 cfm per gallon of coating applied per hour. After the application of the finish coat, force ventilate the tank continuously at a rate of one air change per hour for a period of five days. If the Owner's Representative has any doubt about the adequacy of the curing conditions, provide additional curing time with continued forced-air ventilation.

3.5 HUMIDITY AND TEMPERATURE CONTROL

- A. Use dehumidification equipment, by Munters Moisture Control Services or equal, to control the environment within the tank 24 hours per day during blast cleaning, coating, and coating curing. Dehumidification equipment shall:
 - 1. Continuously deliver air with a maximum relative humidity of 11% sufficient to supply the space with two complete air changes per

2. Supply sufficient dry air so that the air adjacent to the work surfaces shall not exceed 35% relative humidity at any time during the blasting, coating, or curing cycle.
3. Be capable of depressing the dew point in the tank 10°F below ambient air temperature within 20 minutes.
4. Maintain a minimum temperature inside the tank of 60°F.

B. Auxiliary heaters or chillers may be required to maintain the surface temperature at a level acceptable to the coating manufacturer's application parameters. This auxiliary equipment shall be approved for use by the manufacturer of the dehumidification equipment and shall:

1. Be installed in the process air supply duct between the dehumidifier and the space, as close to the space as possible.
2. Use electric or indirect gas-fired heaters. Do not use direct-fired space heaters.
3. Include heater controls that automatically turn the heater off if the airflow is interrupted or the internal temperature of the heater exceeds design temperature.

C. Air heaters or refrigeration equipment are not acceptable substitutes for dehumidification.

D. Seal the space to be controlled as well as possible, allowing air to escape at the bottom of the space away from the point where the dehumidified air is introduced. Maintain a slight positive pressure within the space, unless dust from the blasting operation is hazardous.

3.6 If it is necessary to filter the air escaping the tank, design the filtration system to match the air volume of the dehumidification equipment to avoid interference with the ability to control the space as described herein. Do not recirculate air from the space or from filtration equipment back through the dehumidifier when coating or solvent vapors are present.

3.43.7 SURFACE PREPARATION PRIOR TO ABRASIVE BLAST CLEANING

- A. Remove oil, grease, dust, dirt, rust, moisture, mill scale, and all other foreign or interference substances that would adversely affect the adhesion or durability of the coating system.
- B. Remove oil and grease in accordance with SSPC SP-1. Use clean cloths and cleaning solvents and wipe dry with clean cloths. Do not leave a film or greasy residue on the cleaned surfaces.
- C. Remove weld spatter and weld slag, and grind smooth rough welds, beads, peaked corners, and sharp edges, including erection lugs, in accordance with SSPC SP-2 and SSPC SP-3.

3.53.8 LIMITATIONS ON ABRASIVE BLAST CLEANING

The specified limitations on the application of coatings also applies to blast cleaning. Do not blast clean when conditions would not permit the subsequent application of coating. Blast clean only the area that can be coated with primer or touch-up coating during the same day. In

the event that a cleaned surface colors, oxidizes, or becomes moist, blast clean it again before applying the coating.

| 3.63.9 STANDARD BLAST-CLEANED PANELS

On the first day of abrasive blast cleaning, both on-site and off-site, prepare sample panels with a minimum size of 8 1/2 inches by 11 inches of the same steel plate as the tank for use in maintaining a standard during the work on the project. Achieve the specified surface profile and select with the Owner's Representative a panel illustrating the degree of cleaning specified. Both parties then initial the selected panel and coat it with a clear finish that will not fade or yellow. Submit panel to the Owner's Representative.

~~3-73.10~~ ABRASIVE BLAST CLEANING

- A. Use dry abrasive blast cleaning for metal surfaces. Use a maximum particle size to produce a 1.5- to 2.0-mil surface profile or as recommended by the manufacturer of the specified coating system. Measurement of surface profile will be in accordance with NACE RP0287-02. Sand used for cleaning shall be washed, uniformly graded, dry, and free of contaminants. Do not use abrasives that have become contaminated in automatic equipment. When field blast cleaning with hand-held nozzles, do not recycle or reuse blast particles.
- B. After blast cleaning and prior to application of coating, dry clean surfaces to be coated by dusting, sweeping, and vacuuming to remove residue from blasting. Apply the specified primer or touch-up coating within the period of an eight-hour working day. Do not apply coating over damp or moist surfaces. Reclean prior to application of primer or touch-up coating any blast-cleaned surface not coated within said eight-hour period.
- C. Keep the area of the work in a clean condition and do not permit blasting particles to accumulate and constitute a nuisance or hazard. Cover the reservoir inlet, outlet, drain, hydrants, and overflow piping, and prevent blasting particles from being blown into the piping.
- D. During blast cleaning, exercise caution to prevent damage to adjacent preapplied coatings. Schedule blast cleaning and coating such that dust, dirt, blast particles, old coatings, rust, mill scale, etc., will not damage or fall upon wet or newly coated surfaces. Restore any damaged coatings to their specified condition.

~~3-83.11~~ LIMITATIONS ON THE APPLICATION OF COATINGS

- A. Do not apply coatings under the following conditions:
 - 1. When the surrounding ambient air temperature or the temperature of the surface to be coated is below 50°F or as recommended by the manufacturer of the specified coating system.
 - 2. When the temperature of the surface to be coated is more than 5°F below the air temperature or when the surface temperature is over 120°F.
 - 3. When the surface to be coated is wet, moist, or contaminated with any foreign matter.
 - 4. During rain, snow, fog, or mist or when the relative humidity exceeds 85%.
 - 5. When the surface temperature is less than 5°F above the dew point within eight hours after application of coating.
- B. If above conditions are prevalent, the application of coating shall be delayed or postponed until conditions are favorable. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, coating work shall be delayed until midmorning to be certain

that the surfaces are dry. The day's coating shall be completed in time to permit the film sufficient drying time prior to damage by climatic conditions.

- C. Climatic conditions will be monitored by the Owner's Representative utilizing psychrometers and other measuring gauges at the worksite to aid in inspection.
- D. If a change in climatic conditions damages a coating application, repair the damaged coatings to their specified condition.

~~3.93.12~~ PROCEDURES FOR THE APPLICATION OF COATINGS

- A. Conform to the requirements of SSPC PA-1. Follow the recommendations of the coating manufacturer including the selection of spray equipment, brushes, rollers, cleaners, thinners, mixing, drying time, temperature and humidity of application, and safety precautions.
- B. Stir, strain, and keep coating materials at a uniform consistency during application. Apply each coating evenly, free of brush marks, sags, runs, and other evidence of poor workmanship. Finished surfaces shall be free from holidays, defects, or blemishes.
- C. Use a different shade or tint on succeeding coating applications to indicate coverage.
- D. Prior to each coating application, brush coat with the coating material all welds, sharp edges, nuts, bolts, and irregular surfaces difficult to coat to provide complete coverage of all surfaces.
- E. Do not use thinners unless recommended by the coating manufacturer. If thinning is allowed, do not exceed the maximum allowable amount of thinner per gallon of coating material. Stir coating materials at all times when adding thinner. Do not flood the coating material surface with thinner prior to mixing. Do not reduce coating materials more than is absolutely necessary to obtain the proper application characteristics and to obtain the specified dry-film thicknesses.
- F. Remove dust, blast particles, and other debris from blast-cleaned surfaces by dusting, sweeping, and vacuuming. Allow ventilator fans to clean airborne dust to provide good visibility of working area prior to coating applications. Remove dust from coated surfaces by dusting, sweeping, and vacuuming prior to applying succeeding coats.
- G. Observe minimum and maximum recoat times between primer and succeeding coating applications to achieve maximum crosslinking of coatings. If the recommended minimum or maximum recoat time is exceeded, prepare the surface as directed by the coating manufacturer. Apply a second application of the primer or coating if the maximum recoat time has been exceeded.
- H. Apply coating systems to the specified minimum dry-film thicknesses as measured from above the peaks of the surface profile. Measurement shall be in accordance with SSPC PA-2 and shall be corrected for the magnetic effect of the surface profile.

- I. Apply primer or touch-up coating immediately after blast cleaning and before any surface rusting occurs or any dust, dirt, or any foreign matter has accumulated. Reclean steel surfaces by blast cleaning that have surface colored or become moist prior to coating application.

~~3-103.13~~ TANK SURFACES TO RECEIVE COATINGS:
NONSUBMERGED, INTERMITTENTLY SUBMERGED, AND SUBMERGED CONDITIONS

Apply primers and coatings to the exterior surfaces of the steel water tank as follows:

- ~~A. Field apply primer to exterior surfaces of roof plates and knuckle plates.~~
- ~~B. Field apply primer to exterior surfaces of shell plates, access manholes, and other areas not specifically mentioned.~~
- A. Field apply primer to interior surfaces that are nonsubmerged, such as roof plates, knuckle plates, surfaces of rafters and girders, column caps, rafter support ring, angles, splice plates, mating surfaces of bolted connections of the roof structure, and areas of the roof made inaccessible after erection.
- B. Field apply primer to interior surfaces that are intermittently submerged, such as shell plates, roof-supporting columns, exterior and interior surfaces of the overflow pipe and weir inlet, access manholes, collar plates, and other areas not specifically mentioned.
- C. Field apply primer to exterior surfaces of shell plates, access manholes, and other areas not specifically mentioned.
- D. Field apply primer to interior surfaces that are continuously submerged, such as floor plates, wear plates, top surfaces of column baseplates, collar plates and projecting pipes, drain sump and deflection baffles, bottom 6 inches of shell plates, and other areas not specifically mentioned. Cleaning, priming, and coating are not required on the underside of the floor and wear plates. Field apply interior coating after erection. Coat floor last.
- E. Coat specified accessories that are either hot-dipped galvanized or of aluminum construction using the same coating system as specified for the adjacent tank surface. Specified accessories do not receive shop-applied primers. Apply coatings on specified accessories after treatment and at the same time adjacent tank surfaces are being field coated.

3.14 APPLICATION OF INTERIOR COATING SYSTEM

- A. Surface Preparation: Clean interior surfaces, including ferrous metal accessories and piping, prior to primer application in accordance with SSPC SP-10.
- B. Primer: After surface preparation, field-apply one primer coat of epoxy on the exposed interior surfaces to a dry-film thickness of 4 mils.
- C. Intermediate: After observing specified recoat time and surface condition, field apply one intermediate coat of epoxy on the exposed interior surfaces to a dry-film thickness of 6 mils.
- D. Finish: After observing specified recoat time and surface condition,

field apply one finish coat of epoxy on the exposed interior surfaces to a dry-film thickness of 6 mils.

E. Total System: The total interior coating system shall have a minimum dry-film thickness of 16 mils.

F. Apply two or more coats on the floor. Maximum thickness per coat shall not exceed 20 mils. Total thickness of the system shall be at least 40 mils.

~~3-113.15~~ APPLICATION OF EXTERIOR COATING SYSTEM ON ROOF AND KNUCKLE PLATES AND SHELL PLATES

- A. Surface Preparation: Clean exterior surfaces, including ferrous metal accessories and piping, prior to primer application in accordance with SSPC SP-10.
- B. Primer: After surface preparation field apply one primer coat of inorganic zinc on the exterior surfaces of the roof and knuckle plates to a dry-film thickness of 3 mils.
- C. Treatment: Specified accessories are either hot-dipped galvanized or of aluminum construction. Field apply one coat of passivator or metal conditioner to treat the galvanized and aluminum surfaces prior to the application of the primer, touch-up, intermediate, and finish coats. Use the products as recommended by the coating manufacturer.
- D. Primer: After surface preparation and treatment, field apply one prime coat of epoxy on the exterior shell surfaces to a dry-film thickness of 3 mils.
- E. Intermediate: After observing specified recoat time and surface condition, field apply one intermediate coat of epoxy paint on the exterior surfaces to a dry-film thickness of 5 mils.
- F. Finish: After observing specified recoat time and surface condition, field apply one finish coat of polyurethane enamel on the exterior surfaces to a dry-film thickness of 2 mils. Use the color selected by the Owner.
- G. Total System: The total exterior coating system on shell plates shall have a minimum dry-film thickness of 10 mils. The total exterior coating system on roof and knuckle plates shall have a minimum dry-film thickness of 13 mils.

~~3-123.16~~ FIELD INSPECTION FACILITIES

Provide the Owner's Representative with facilities for inspection including:

- A. Illumination and labor to move the lights, whenever required by the Owner's Representative. Provide additional lights and supports sufficient to illuminate areas to be inspected. The Owner's Representative will determine the level of illumination required for inspection purposes.
- B. Temporary ladders and scaffolding. Erect and move to the locations requested by the Owner's Representative.

~~3.133.17~~ INSPECTION AND TESTING

- A. The Owner's Representative will perform such tests as are required to demonstrate substantial compliance with all phases of the surface preparation, abrasive blast cleaning, and application of the coating systems. Test equipment shall include but not be limited to the following: SSPC surface preparation standards, surface profile comparator, test tape, micrometer, abrasive sieve test, ultraviolet lamp, mirror, certified thickness calibration plates, magnetic-type dry-film thickness gauge, nondestructive holiday detector, and nonsudsing-type wetting agent. Equipment will be calibrated by the Owner's Representative in the presence of the Contractor to verify its accuracy prior to use. The Contractor shall provide the test equipment.
- B. Notify the Owner's Representative three working days in advance of field operations involving abrasive blast cleaning and coating applications.
- C. The Owner's Representative will verify the degree of surface cleanliness profile of the field blast cleaned surface. Perform additional blast cleaning over areas not conforming to the specified surface preparation.
- D. The Contractor shall inspect each coat of primer, touch-up, intermediate, and finish coating to determine thickness and integrity. Each coating application will be checked and deficiencies marked. After observing specified recoat time, apply additional coating materials over areas not having the specified minimum dry-film thickness and areas having any holidays or pinholes. After correction of deficiencies, the Contractor shall reinspect those areas to determine the acceptability of the additional coating. Each coating application must be 100% to the satisfaction of the Owner's Representative prior to succeeding coating applications.
- E. After completion of the epoxy coating curing cycle, conduct an MEK wipe test with a clean rag, using 25 rubs per each immersion test area on the floor and shell. Test areas will be selected at random by the Owner's Representative. The coating shall be considered cured if it retains its gloss and hardness after the MEK wipe test.

3.18 DISINFECTION

- A. Disinfect the interior surfaces of the tank after the finish coat of the interior coating system has dried and cured. Observe the manufacturer's recommendations of the specified coating system for ventilation requirements and time interval for complete drying.
- B. Prior to disinfection, remove all scaffolding, planks, tools, rags, and other material not a permanent part of the tank. Thoroughly flush the inlet and outlet piping with potable water. Use a high-pressure water

Final Closure Design MSW Landfill Cells 1 and 2, Andersen AFB Guam WON 1333930
blaster and wash interior surfaces of the tank with potable water. Drain and squeegee water, dirt, and foreign material accumulated in this cleaning operation from the tank.

- C. Disinfect the tank by chlorination in accordance with the requirements of AWWA C652. Use either liquid chlorine or sodium hypochlorite solution as the available form of chlorine. Do not use calcium hypochlorite in granular or tablet form. Spray a chlorine solution having a chlorine content of 300 mg/L on the interior surfaces to be in contact with water when the tank is put into service. Do not drain the used chlorine solution from the tank during the spraying operation.
- D. At the completion of disinfection, partially fill the tank with water to a depth of 1 foot and retain for four hours minimum. After the four-hour period, drain and squeegee chlorinated water from the tank. Rinse with potable water.
- E. Discharge of chlorinated water into watercourses or surface waters is regulated by the NPDES. Prior to discharge, review with the Owner and the applicable regulatory agency the location and rate of flow of discharge. Apply a reducing agent to the water to be wasted to neutralize thoroughly the chlorine residual remaining in the water. See AWWA C652, Appendix B for neutralizing chemicals.
- F. Potable water necessary for the wash down, disinfection, and rinse will be provided by the Owner. The Contractor shall make all connections to the Owner-installed meter and reduced-pressure backflow prevention device. The Owner will fill the tank with potable water to the overflow level after the Contractor has completed the disinfection operation.
- G. After the tank has been filled to the overflow level, the Owner's Representative will take two water samples from the tank for bacteriological testing within six hours and obtain a bacteriological quality test to demonstrate the absence of coliform organisms. If the testing procedure shows the presence of coliform bacteria, provide additional chlorination of the water in the tank and retest drain the tank, disinfect, refill, and retest at the Contractor's expense. The Owner will deduct the cost of water used to refill the tank from progress payments due the Contractor. Continue disinfecting and retesting until satisfactory results are achieved.

3.19 ELEVEN-MONTH INSPECTION OF COATING SYSTEMS

- A. Conduct a first-anniversary warranty inspection of the interior and exterior surfaces of the tank during the eleventh month following final acceptance of the work by the Owner to determine whether any repair work is necessary. The Owner will establish the inspection date and notify the Contractor. Provide underwater inspection by means of videotape with photos. Videotape and photograph the entire interior surface, including roof underside. If the underwater examination reveals failed areas of coating, then the The Owner will drain and wash down the tank. The Contractor shall provide lighting and scaffolding for the tank inspection. Where coatings have peeled off, bubbled, or cracked, and any location where rusting is evident shall be considered to be a failure of the coating system. Perform repairs at failures by removing the deteriorated coating. Prepare the surface by abrasive blast cleaning and apply the same coating systems as specified in this section. Inspection and repairs shall be performed at no cost to the Owner.

END OF SECTION



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND MARIANAS
PSC 455, BOX 195
FPO AP 96540-2937

16 August 2016

NOTICE 4
PRE-PROPOSAL REQUESTS FOR INFORMATION AND RESPONSES
SOLICITATION N40192-16-R-1305
FY16 MILCON P-635, MUNICIPAL SOLID WASTE LANDFILL CLOSURE
ANDERSEN AIR FORCE BASE, GUAM

QUESTION 17: Reference RFP Part B, Specification Sections 01 11 00, 09 96 72, and 09 96 74.

(a) Section 01 11 00 paragraph 1.2 – General description of the project does not indicate work on the existing leachate tank. Please provide specific scope of work together with specification for the existing leachate tank upgrades.

(b) Section 09 96 72 Paragraph 1.01, Description, calls for application of protective coating on the interior and exterior of the tank. Section 09 96 74 Paragraph 1.01, Description, only calls for application of protective coating on exterior tank surfaces. Please confirm if both exterior and interior of the tank will receive new coating. If the interior of the tank will receive new coating, who will be responsible for draining the tank of its content?

REVISED Answer 17:

(a) See response to Question 10.

(b) The interior and exterior of the tank shall be coated and the Contractor will be responsible for draining the tank contents.

QUESTION 32: Since the interior of the leachate tank needs to be cleaned and coated therefore the tank needs to be emptied.

(a) Who will be responsible for emptying the tank?

(b) If the contractor is responsible for emptying the tank what is the expected volume of the leachate?

(c) Is there a disposal area of the leachate inside the base free of charge? And provide location of the disposal area?

REVISED Answer 32:

(a) Contractor responsible for emptying the tank to include analyzing and properly disposing of the waste in the tank and waste generated from tank cleaning.

(b) 42,300 gallons.

(c) There is no available disposal area on base free of charge.