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Delivered Via Electronic Mail
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Via email: Martin.Taylor@waterboards.ca.gov

To Whom It May Concern:

Request for Waiver of AIS Provisions for PTFE Encapsulated Butterfly Valves for the Valencia Water Reclamation Plant Advanced Water Treatment Facility Project, Clean Water State Revolving Fund (CWSRF) Project No. C-06-8156-110

The Sanitation Districts of Los Angeles County (Districts) are requesting a product-specific project waiver of AIS provisions be issued for 3-inch to 10-inch Polytetrafluoroethylene (PTFE) Encapsulated Butterfly Valves for the construction of the Valencia Water Reclamation Plant Advanced Water Treatment Facility (VWRP AWTF) Project. In accordance with the United States Environmental Protection Agency (USEPA) memorandum, *Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014*, the information required for a waiver to be processed is included below and in the attached documents.

Project Background

The VWRP AWTF project involves the construction of an advanced water treatment facility to comply with the requirements established by the Regional Water Quality Control Board – Los Angeles associated with the Santa Clara River Total Maximum Daily Load (TMDL) for chloride. The project will remove chloride from a portion of the plant's effluent and this low chloride flow will be blended back with the remaining flow prior to disinfection and discharge. The permitted discharge capacity of the VWRP is 21.6 million gallons per day (mgd) and currently, the VWRP produces approximately 15 mgd of tertiary-treated recycled water that is mainly discharged to the Santa Clara River.

The AWTF will consist of microfiltration (MF) for particulate removal, nanofiltration (NF) for water softening, an enhanced membrane system (EMS) using high recovery reverse osmosis (RO) for chloride removal, and a truck loading station for brine disposal. Approximately 8.3 mgd of VWRP tertiary-treated water will be diverted to the AWTF, which will produce approximately 7.7 mgd of low chloride

NOTE: The referenced attachments with project diagrams, schedules, and supplier correspondence are in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing SRF_AIS@epa.gov.

product water that will be blended with the remaining VWRP tertiary-treated water to meet a 100-mg/L chloride TMDL.

The VWRP AWTF project is funded by a loan through the Clean Water State Revolving Loan Fund (CWSRF). The Consolidated Appropriations Act of 2014 includes an “American Iron and Steel” (AIS) provision that requires recipients of CWSRF assistance to use iron and steel products produced in the United States.

The VWRP AWTF project includes the installation of twenty-five(25) 3-inch to 10-inch diameter PTFE Encapsulated Butterfly Valves, which are subject to AIS provisions. The butterfly valves will be used to isolate fiberglass pipelines carrying concentrate and permeate from the EMS RO system and ion exchange regeneration solution. Due to the high scaling potential in these locations, the butterfly valves must have a PTFE coating to prevent scale formation on the valves.

Discussions with possible manufacturers and suppliers for the PTFE Encapsulated Butterfly Valves have indicated that none are able to meet both the project specifications and the AIS provisions. It is believed that these products are not produced in the U.S. in sufficient and reasonably available quantities and of satisfactory quality to meet the needs of the project.

General

Description of the foreign and domestic construction materials

The 3-inch to 10-inch diameter PTFE Encapsulated Butterfly Valves from Bray are made of foreign-sourced materials including ductile iron for the body, PTFE encapsulated 316 stainless steel for the disc, Hastelloy C276 for the shaft and bearings, Teflon and 316 stainless steel for the seat and valve shaft packing, and 316 stainless steel for the disc pins.

Unit of measure

The unit of measurement is one(1) valve (each).

Quantity

There are twenty-five(25) PTFE Encapsulated Butterfly Valves in this project ranging from three(3) to ten(10) inches.

Price

The total price for the PTFE Encapsulated Butterfly Valves is approximately [REDACTED]. The price of the valves ranges from [REDACTED] to [REDACTED] each.

Time of delivery or availability

The estimated delivery time is approximately 18-20 weeks after an approved submittal.

Location of the construction project

The Valencia WRP is located at:
28185 The Old Road
Valencia, CA 91355

[REDACTED]

[REDACTED]

Detailed justification for the use of foreign construction materials

These valves will be installed in locations with very high scaling potential, including the brine and waste regeneration storage areas. The PTFE coating helps prevent scale formation on the valves.

Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with prime contractor.

Refer to Attachment A, the AIS provision contract language in Section 1D, Part 4 of the Special Provisions, which communicates the AIS requirements to potential bidders.

Availability Waiver Request

Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials

[REDACTED] contacted the following manufacturers about the availability of the specified PTFE Encapsulated Butterfly Valves. None of the manufacturers could domestically source the PTFE Encapsulated Butterfly Valves in accordance with the Special Provisions. Refer to Attachment B, the letter from [REDACTED], which contains the list of manufacturers contacted and their responses.

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Documentation of the assistance recipient's efforts to find available domestic sources, such as description of the process for identifying suppliers and a list of contacted suppliers

In addition to the manufacturers contacted by [REDACTED] as listed above, District engineers contacted the following manufacturers and suppliers and asked about the availability of the specified PTFE Encapsulated Butterfly Valves. The manufacturers and suppliers who responded indicated that they are unable to provide AIS compliant butterfly valves that meet the specifications.

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Project schedule

The anticipated schedule for the VWRP AWTF project as it relates to the PTFE Encapsulated Butterfly Valves is summarized as follows:

- PTFE Encapsulated Butterfly Valves Submittal Review and Approval: As soon as AIS waiver is granted
- Procurement and Delivery: 18-20 weeks after approved submittal
- Project Completion: February 2022

Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials

The technical specification for the PTFE Encapsulated Butterfly Valves (Section 40_05_64, Part 2.04, BFV523 - PTFE Encapsulated Butterfly Valves) is included in Attachment C. Select plans and sections of the VWRP AWTF project detailing the PTFE Encapsulated Butterfly Valves are presented in Attachment D.

Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of domestic construction materials for which the waiver is sought.

Refer to Attachment B for a statement from Santa Fe WinWater describing their communication with manufacturers who cannot meet the AIS provisions for the specified PTFE Encapsulated Butterfly Valves.

If you have any questions, please contact Paul Mikulas, Supervising Engineer, at (562) 908-4288, extension 2175.

Very truly yours,



Paul Mikulas
Supervising Engineer
Wastewater and Solid Waste Design Section

PM:SH:bp

Attachment A - Section 1D of the Special Provisions

Attachment C - Section 40_05_64 of the Special Provisions

Attachment D - Sheet Nos. 3M9-23, 3M9-24, 9M6-1, 9M6-2 of the Contract Drawings

cc: D. Zondervan
M. Hinostroza
S. Hunkler
M. Copeland
D. Drorbaugh
I. Chang

DOC 5541809

Attachment A

SECTION 1D

FEDERAL GRANT AND STATE REVOLVING FUND (SRF) LOAN REQUIREMENTS

1. GENERAL

The award of the Contract, if it be awarded, will be made to the lowest responsive, responsible Bidder whose proposal complies with all the prescribed requirements. But, until an award is made, the right will be reserved to reject any or all bids and to waive technical errors or discrepancies if to do so is deemed to serve the best interests of the District.

Bidders shall comply with all applicable provisions of the Clean Water State Revolving Fund (CWSRF) Loan Program Disadvantaged Business Enterprise (DBE) Requirements, dated December 2016. A copy of the DBE Requirements from the State Water Resources Control Board is incorporated as **Attachment 1** to this Section of these Special Provisions.

The State Water Resources Control Board has established an aspirational goal for the CWSRF program of 2 percent for Minority Owned Business Enterprises (MBE) and 1 percent for Women Owned Business Enterprises (WBE), for a combined 3 percent overall DBE participation. DBE participation is encouraged, however, DBE participation is not required and award of the Contract is not based on race, gender, disabled, disadvantaged or small business status.

Bidders shall perform the six(6) Good Faith Efforts (GFE) as outlined in **Attachment 1**, prior to bid opening. Within three(3) working days after the date of bid opening, the apparent successful low bidder must submit documentation to the District showing that, prior to bid opening, all required GFE were performed. The documentation shall be delivered or mailed to the Districts' Joint Administration Office and to the attention of Mr. Joe Smisko, located at 1955 Workman Mill Road, Whittier, California, 90601. In addition, the following two(2) forms from the DBE Requirements must be completed by bidders and included with their Proposal Form:

- DBE Subcontractor Performance Form (**Form SWRCB 4500-3**).
- DBE Subcontractor Utilization Form (**Form SWRCB 4500-4**).

Failure to submit GFE documentation within the time specified or include the completed forms with the Proposal Form may result in a determination that the bid is non-responsive.

The following form from the DBE Requirements does not need to be included with the Proposal Form but must be provided by the Contractor to its DBE subcontractors:

- DBE Subcontractor Participation Form (**Form SWRCB 4500-2**).

2. ADDITIONAL DBE OUTREACH RESOURCES IN LOS ANGELES COUNTY:

Additional list of DBE firms may also be obtained by contacting the Minority Business Development Agency (MBDA) Business Center - Los Angeles:

MBDA Business Center - Los Angeles	2801 So. Hoover Street
University of Southern California	Los Angeles, CA 90089-7706
	FAX: (213) 743-4511
	TELEPHONE: (213) 743-2164

3. SIGNS ON-SITE

3.1 Sign No. 1.

A sign acknowledging the State of California (State) for providing funds for this project shall be provided and installed at a prominent location on the project site, as accepted by the Engineer. The proposed sign shall be submitted to the District for acceptance prior to fabrication, and shall be constructed in a professional manner. The Contractor shall maintain the sign in good condition for the duration of the construction period. The sign requirements shall be as follows:

The sign shall be at least four(4) feet tall by eight(8) feet wide made of 3/4-inch thick exterior grade plywood or other approved material. The sign shall include the following disclosure statement and color logos, which are available on the State Water Resources Control Board's website at: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_temp_lates.shtml:



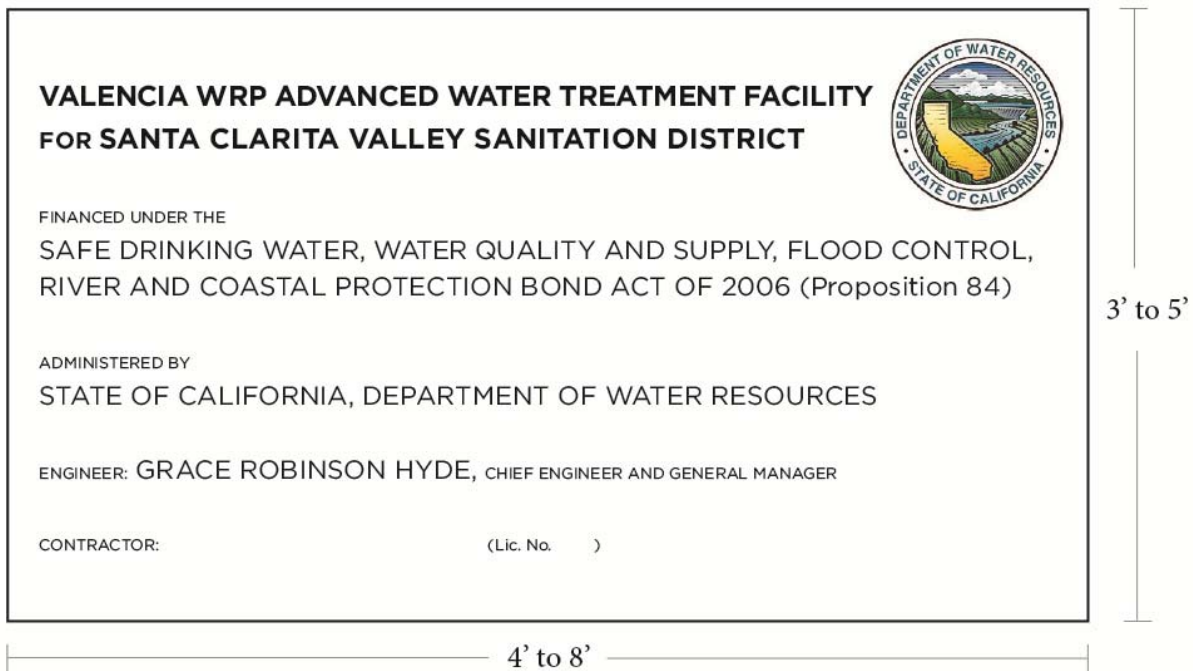
"Funding for this \$x.x million Valencia Water Reclamation Plant Advanced Water Treatment Facility project has been provided in full or in part by the Clean Water State Revolving Fund through an agreement with the State Water Resources Control Board. California's Clean Water State Revolving Fund is capitalized through a variety of funding sources, including grants from the United States Environmental Protection Agency and State bond proceeds."

The amount (in millions) shall be the Contractor's bid amount rounded to the nearest \$100,000 and shall be indicated on the sign in place of "\$x.x". The sign may also include the District's required promotional information, so long as the above logos and disclosure statements are equally prominent on the sign.

3.2 Sign No. 2.

A second sign shall be provided for Proposition 84 grant in accordance with the following requirements.

- a. The letters shall be painted dark blue per Federal Standard 595C, No. 15102.
- b. The sign shall be made of 3/4-inch thick exterior grade plywood or other approved material.
- c. Include the California Department of Water Resources (DWR) logo, which shall be sized to permit public viewing. The District will provide a digital file of the color logo to the Contractor.
- d. Adequate structural supports shall be provided for the sign.
- e. The sign shall be kept at a proper distance above prevailing grade to permit public viewing.



After installation of the sign, the Contractor shall submit digital photographs of the Signs No. 1 and No. 2 at the jobsite to the District as evidence of compliance.

4. AMERICAN IRON AND STEEL REQUIREMENT

4.1 General. The CWSRF Loan Program has statutory provisions commonly known as the American Iron and Steel (AIS) requirement that requires all of the iron and steel products used in this project to be produced in the United States, including iron and steel products provided by the Contractor pursuant to these Contract Documents. The Contractor shall comply with all applicable provisions of the AIS requirement.

4.2 Definitions. "Iron and steel" products include, but are not limited to, the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete and construction materials. A list of applicable products and additional information, including any published waivers, are posted on the United States Environmental Protection Agency (EPA) Website at: http://water.epa.gov/grants_funding/aisrequirement.cfm.

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHICH PRODUCTS FURNISHED UNDER THESE CONTRACT DOCUMENTS MUST COMPLY WITH THE AIS REQUIREMENT.

4.3 Contractor's Acknowledgment. By entering into the Contract for this work, the Contractor acknowledges to and for the benefit of the District and the State that:

- a. The Contractor has reviewed and understands the AIS requirement.
- b. All of the applicable iron and steel products used in this project will be or have been produced in the United States in a manner that complies with the AIS requirement, unless the Contractor has obtained an official written waiver of the AIS requirement for a particular product.
- c. The Contractor will provide any further verified information, certification or assurance of compliance with the AIS requirement, or information necessary to support a waiver of the AIS requirement, as may be requested by the District or State.

4.4 Contractor's Legal Obligations to the State of California. While the Contractor has no direct contractual privity with the State as a lender to the District for the funding of this project, the District and the Contractor agree that the State is a third-party beneficiary and neither this Section nor any other provision of these Special Provisions necessary to give this Section force or effect shall be amended or waived without the prior written consent of the State.

4.5 Penalties. Notwithstanding any other provision of these Special Provisions, any failure to comply with the AIS requirement or requirements of this Section by the Contractor shall permit the District or State to recover as damages against the Contractor any loss, expense, or cost incurred by the District or State resulting from any such failure, including without limitation attorney's fees, any impairment or loss of funding, whether in whole or in part, from the State, or any damages owed to the State by the District.

4.6 AIS Certification Submittal. All equipment and material submittals for products that contain iron and/or steel shall include one(1) of the documents listed below as the first page of the submittal after the submittal cover form. Submittal packages that do not include one(1) of these required documents will be returned without review.

- a. AIS Certification Form: The appropriate certification form(s) shall be included with the submittal package for equipment and materials that must comply with the AIS requirement. Sample certification forms are included as **Attachment 2** or may be found on the EPA Website.
- b. Approved Waiver: An official written waiver document approved by the EPA shall be included with the submittal package for equipment and materials that have received a waiver from the AIS requirement.
- c. Contractor Letter: Contractor's written explanation, signed on company letterhead, shall be included with the submittal package for equipment and materials that contain iron and/or steel but do not need to comply with the AIS requirement.

4.7 Enforcement. The State may conduct site inspections and examine documentation to confirm that the Contractor is complying with the AIS requirement. The Contractor shall maintain a log of all AIS certification submittals at the project site for use by District and State inspectors. Each month, the Contractor shall provide a copy of the log to be checked by the Engineer. The District may withhold monthly progress payments until the log has been checked by the Engineer. All costs and delays associated with AIS compliance inspections shall be borne by the Contractor and shall not be a basis for extra work.

5. TRAFFICKING IN PERSONS

The Contractor, its subcontractors, and their employees are subject to the Trafficking Victims Protection Act of 2000 and shall not: engage in severe forms of trafficking in persons during the term of this Contract, procure a commercial sex act during the term of this Contract, or use forced labor in the performance of this Contract. The Contractor shall inform the District immediately of any information regarding a violation of the foregoing sentence, and the District will notify the State Water Resources Control Board. The Contractor's failure to comply with any part of this provision may subject the State Water Resources Control Board to loss of Federal funds in the amount of \$101,065,000. The Contractor agrees to compensate the District and State Water Resources Control Board for any such funds lost due to its failure to comply with this condition. If the Contractor or any of its subcontractors that is a private entity is determined to have violated the Trafficking Victims Protection Act of 2000, then the District may unilaterally terminate this Agreement and the Contractor's full payment to the District and/or State Water Resources Control Board will be due immediately.

6. DEBARMENT AND SUSPENSION

The Contractor shall comply with Executive Order 12549 (1986), Subpart C of 2 CFR Part 180, and 2 CFR Part 1532, which require the contractor to certify that it has not been debarred, suspended, or declared ineligible by a federal department or agency, and that it will not contract with a subcontractor who is debarred, suspended, or declared ineligible by a federal department or agency.

The Contractor shall provide certification to the District in the form set forth in **Attachment 3** at the end of this section of these Special Provisions, and shall require this certification to be provided from each and every subcontractor. All contracts entered into by the contractor with its subcontractors for the work must require the subcontractor to comply with Executive Order 12549 (1986), Subpart C of 2 CFR Part 180, and 2 CFR part 1532, and provide the certification in the form provided in **Attachment 3**.

The Contractor and their subcontractors shall prepare and sign the required certification (**Attachment 3**) and shall submit the certifications to the District within ten(10) working days of the NTP as a Contractor to Office Engineering Correspondence via Unifier™.

* * * * *



California State Water Resources Control Board
 Division of Financial Assistance
 1001 I Street • Sacramento, California 95814 • (916) 341-5700 FAX (916) 341-5707
 Mailing Address: P. O. Box 944212 • Sacramento, California • 94244-2120
 Internet Address: <http://www.waterboards.ca.gov>

Guidelines for Meeting the California State Revolving Fund (CASRF) Programs (Clean Water and Drinking Water SRF) Disadvantaged Business Enterprise Requirements

The Disadvantaged Business Enterprise (DBE) Program is an outreach, education, and objectives program designed to increase the participation of DBEs in the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) Programs.

How to Achieve the Purpose of the Program

Recipients of CWSRF/DWSRF financing that are subject to the DBE requirements (recipients) are required to seek, and are encouraged to use, DBEs for their procurement needs. Recipients should award a "fair share" of sub-agreements to DBEs. This applies to all sub-agreements for equipment, supplies, construction, and services.

The key functional components of the DBE Program are as follows:

- Fair Share Objectives
- DBE Certification
- Six Good Faith Efforts
- Contract Administration Requirements
- DBE Reporting

Disadvantaged Business Enterprises are:

- Entities owned and/or controlled by socially and economically disadvantaged individuals as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note) (10% statute), and Public Law 102-389 (42 U.S.C. 4370d) (8% statute), respectively;
- Minority Business Enterprise (MBE) - entities that are at least 51% owned and/or controlled by a socially and economically disadvantaged individual as described by Title X of the Clean Air Act Amendments of 1990 (42 U.S.C. 7601 note), and Public Law 102-389 (42 U.S.C. 4370d), respectively;
- Women Business Enterprise (WBE) - entities that are at least 51% owned and/or controlled by women;
- Small Business Enterprise (SBE);
- Small Business in a Rural Area (SBRA);
- Labor Surplus Area Firm (LSAF); or
- Historically Underutilized Business (HUB) Zone Small Business Concern or a concern under a successor program.

Certifying DBE Firms:

Under the DBE Program, entities can no longer self-certify and contractors and sub-contractors must be certified at bid opening. Contractors and sub-contractors must provide to the CASRF recipient proof of DBE certification. Certifications will be accepted from the following:

- The U.S. Environmental Protection Agency (USEPA)
- The Small Business Administration (SBA)
- The Department of Transportation's State implemented DBE Certification Program (with U.S. citizenship)
- Tribal, State and Local governments
- Independent private organization certifications

If an entity holds one of these certifications, it is considered acceptable for establishing status under the DBE Program.

Revised 12/2016

Six Good Faith Efforts (GFE)

All CWSRF/DWSRF financing recipients are required to complete and ensure that the prime contractor complies with the GFE below to ensure that DBEs have the opportunity to compete for financial assistance dollars.

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practical through outreach and recruitment activities. For Tribal, State and Local Government Recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
2. Make information on forthcoming opportunities available to DBEs. Posting solicitations for bids or proposals for a minimum of 30 calendar days in a local newspaper, before the bid opening date.
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs.
4. Encourage contracting with a group of DBEs when a contract is too large for one firm to handle individually.
5. Use the services of the SBA **and/or** Minority Business Development Agency (MBDA) of the US Department of Commerce.
6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.

The forms listed in the table below and attached to these guidelines; must be completed and submitted with the GFE:

FORM NUMBER	FORM NAME	REQUIREMENT	PROVIDED BY	COMPLETED BY	SUBMITTED TO
SWRCB Form 4500-2 or EPA Form	DBE Sub-Contractor Participation Form	As Needed to Report Issues	Recipient	Sub-contractor	EPA DBE Coordinator
SWRCB Form 4500-3 or EPA Form	DBE Sub-Contractor Performance Form	Include with Bid or Proposal Package	Prime Contractor	Sub-Contractor	SWRCB by Recipient
SWRCB Form 4500-4 or EPA Form	DBE Sub-Contractor Utilization Form	Include with Bid or Proposal Package	Recipient	Prime Contractor	SWRCB by Recipient

The completed forms must be submitted with each Bid or Proposal. The recipient shall review the bidder's documents closely to determine that the GFE was performed **prior** to bid or proposal opening date. Failure to complete the GFE and to substantiate completion of the GFE before the bid opening date could jeopardize CWSRF/DWSRF financing for the project. The following situations and circumstances require action as indicated:

1. If the apparent successful low bidder was rejected, a complete explanation must be provided.
2. Failure of the apparent low bidder to **perform** the GFE **prior** to bid opening constitutes a non-responsive bid. The construction contract may then be awarded to the next low, responsive, and responsible bidder that meets the requirements or the Recipient may re-advertise the project.
3. If there is a bid dispute, all disputes shall be settled **prior** to submission of the Final Budget Approval Form.

Administration Requirements

- A recipient of CWSRF/DWSRF financing must require entities receiving funds to create and maintain a Bidders List if the recipient of the financing agreement is subject to, or chooses to follow, competitive bidding requirements.
- The Bidders list must include all firms that bid or quote on prime contracts, or bid or quote on subcontracts, including both DBEs and non-DBEs.

Revised 12/2016

- Information retained on the Bidder's List must include the following:
 1. Entity's name with point of contact;
 2. Entity's mailing address and telephone number;
 3. The project description on which the entity bid or quoted and when;
 4. Amount of bid/quote; and
 5. Entity's status as a DBE or non-DBE.
- The Bidders List must be kept until the recipient is no longer receiving funding under the agreement.
- The recipient shall include Bidders List as part of the Final Budget Approval Form.
- A recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the Recipient.
- A recipient must be notified in writing by its prime contractor prior to any termination of a DBE subcontractor by the prime contractor.
- If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the six GFEs if soliciting a replacement subcontractor.
- A recipient must require its prime contractor to employ the six GFEs even if the prime contractor has achieved its fair share objectives.

Reporting Requirements

For the duration of the construction contract(s), the recipient is required to submit to the State Water Resources Control Board DBE reports annually by October 10 of each fiscal year on the attached Utilization Report form (UR-334). Failure to provide this information as stipulated in the financial agreement language may be cause for withholding disbursements.

CONTACT FOR MORE INFORMATION

SWRCB, CASRF – Barbara August (916) 341-6952 barbara.august@waterboards.ca.gov

US EPA, Region 9 – Joe Ochab (415) 972-3761 ochab.joe@epa.gov

Revised 12/2016



***Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form***

A Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-2 (DBE Subcontractor Participation Form)

Revised 12/2016



Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Form with fields: Subcontractor Name, Project Name, Bid / Proposal No., Assistance Agreement ID No. (if known), Point of Contact, Address, Telephone No., Email Address, Prime Contractor Name, Issuing/Funding Entity

Table with 3 columns: Contract Item Number, Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies, Price of Work Submitted to the Prime Contractor. Includes a section for DBE Certification (DOT, SBA, Other) and EPA standards (Meets/exceeds EPA certification standards? YES, NO, Unknown).

1 A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.
2 Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-3 (DBE Subcontractor Performance Form)

Revised 12/2016

FAILURE TO SUBMIT THIS FORM WITH BID
MAY CAUSE THE BID TO BE REJECTED AS NON-RESPONSIVE



Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE1 subcontractor's2 and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Form with fields: Prime Contractor Name, Project Name, Bid / Proposal No., Assistance Agreement ID No. (if known), Point of Contact, Address, Telephone No., Email Address, Issuing/Funding Entity

Section with text: I have identified potential DBE certified subcontractors. YES NO. If yes, please complete the table below. If no, please explain: Table with columns: Subcontractor Name/ Company Name, Company Address / Phone / Email, Estimated Dollar Amount, Currently DBE Certified?

--Continue on back if needed--

1 A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

2 Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-4 (DBE Subcontractor Utilization Form)

Revised 12/2016

FAILURE TO SUBMIT THIS FORM WITH BID MAY CAUSE THE BID TO BE REJECTED AS NON-RESPONSIVE

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

FAILURE TO SUBMIT THIS FORM WITH BID
MAY CAUSE THE BID TO BE REJECTED AS NON-RESPONSIVE

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-4 (DBE Subcontractor Utilization Form)

Revised 12/2016



**STATE WATER RESOURCES CONTROL BOARD – DIVISION OF FINANCIAL ASSISTANCE
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION
CALIFORNIA STATE REVOLVING FUNDS (CASRF)
FORM UR-334**

1. Grant/Finance Agreement Number:		2. Annual Reporting Period 10/1/____ through 09/30/____		3. Purchase Period of Financing Agreement:	
4. Total Payments Paid to Prime Contractor or Sub-Contractors During Current Reporting Period: \$					
5. Recipient's Name and Address:				6. Recipient's Contact Person and Phone Number:	
7. List All DBE Payments Paid by Recipient or Prime Contractor During Current Reporting Period:					
Payment or Purchase Paid by Recipient or Prime Contractor	Amount Paid to Any DBE Contractor or Sub-Contractor For Service Provided to Recipient		Date of Payment (MM/DD/YY)	Procurement Type Code** (see below)	Name and Address of DBE Contractor of Sub-Contractor or Vendor
	MBE	WBE			
8. Initial here if no DBE contractors or sub-contractors paid during current reporting period:					
9. Initial here if all procurements for this contract are completed:					
10. Comments:					
11. Signature and Title of Recipient's Authorized Representative				12. Date	

Email Form UR-334 to:
DrinkingWaterSRF@waterboards.ca.gov OR CleanWaterSRF@waterboards.ca.gov

Questions may be directed to:
 Barbara August, SWRCB
Barbara.August@waterboards.ca.gov
 Phone: (916) 341-6952
 Fax: (916) 327-7469

- | |
|---|
| <p>**Procurement Type:</p> <ol style="list-style-type: none"> 1. Construction 2. Supplies 3. Services (includes business services; professional services; repair services and personnel services) 4. Equipment |
|---|

Revised 12/2016

STATE WATER RESOURCES CONTROL BOARD - DIVISION OF FINANCIAL ASSISTANCE
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION
CALIFORNIA STATE REVOLVING FUNDS

INSTRUCTIONS FOR COMPLETING FORM UR-334

- Box 1** Grant or Financing Agreement Number.
- Box 2** Annual reporting period.
- Box 3** Enter the dates between which you made procurements under this financing agreement or grant.
- Box 4** Enter the total amount of payments paid to the contractor or sub-contractors during this reporting period.
- Box 5** Enter Recipient's Name and Address.
- Box 6** Enter Recipient's Contact Name and Phone Number.
- Box 7** Enter details for the DBE purchases only and be sure to limit them to the current period. 1) Use either an "R" or a "C" to represent "Recipient" or "Contractor." 2) Enter a dollar total for DBE and total the two columns at the bottom of the section. 3) Provide the payment date. 4) Enter a product type choice from those at the bottom of the page. 5) List the vendor name and address in the right-hand column
- Box 8** Initial here if no DBE contractors or sub-contractors were paid during this reporting period.
- Box 9** Initial this box only if all purchases under this financing agreement or grant have been completed during this reporting period or a previous period. If you initial this box, we will no longer send you a survey.
- Box 10** This box is for explanatory information or questions.
- Box 11** Provide an authorized representative signature.
- Box 12** Enter the date form completed.

Revised 12/2016

SAMPLE CERTIFICATION FOR AIS COMPLIANCE

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date: _____

Company Name: _____

Company Address: _____

City, State Zip: _____

Subject: American Iron and Steel Certification for Valencia WRP Advanced Water Treatment Facility (Doc# 4419422).

I, _____, certify that the following
(Company Representative)
products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

- 1. _____
- 2. _____
- 3. _____

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime Contractor and the Engineer.

Signed by Company Representative: _____

Title: _____

Debarment Certificate

In connection with the Valencia WRP Advanced Water treatment Facility (the "Project"), the undersigned certifies on behalf of [INSERT NAME OF COMPANY] to the best of [his/her] knowledge and belief that [INSERT NAME OF COMPANY] and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any federal department or agency;
2. Have not within a three(3) year period preceding the award of the contract for the Project been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses described in paragraph 2 of this Certificate;
4. Have not within a three(3) year period preceding the award of the contract for the Project had one or more public transactions (federal, state or local) terminated for cause or default; and
5. Will not knowingly enter into a contract with anyone who is ineligible under 2 CFR Part 180 and 2 CFR Part 1532.

I declare under penalty of perjury under the laws of the State of California that the foregoing statements are true and correct and that this Certificate was executed on _____, 2018.

[INSERT NAME OF COMPANY]

By: _____

Print Name: _____

Title: _____

Attachment C

SECTION 40_05_64

BUTTERFLY VALVES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Butterfly valves.
- B. Related sections:
 - 1. Section 01_75_17 - Commissioning and Process Start-Up.
 - 2. Section 09_96_01 - High-Performance Coatings.
 - 3. Section 40_05_51.01 - Common Work Results for Valves.

1.02 REFERENCES

- A. American Society of Mechanical Engineers (ASME):
 - 1. B16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Classes 25, 125 and 250.
 - 2. B16.5 - Pipe Flanges and Flanged Fittings, NPS 1/2 through NPS 24.
- B. American Water Works Association (AWWA):
 - 1. C110 - Standard for Ductile-Iron and Gray-Iron Fittings.
 - 2. C504 - Rubber-Seated Butterfly Valves.
 - 3. C540 - Standard for Power-Actuating Devices for Valves and Sluice Gates.
 - 4. C550 - Protective Interior Coatings for Valves & Hydrants.
 - 5. C606 - Standard for Grooved and Shouldered Joints.
- C. ASTM International (ASTM):
 - 1. A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - 2. A216 - Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for Higher-Temperature Service.
 - 3. A276 - Standard Specification for Stainless Steel Bars and Shapes.
 - 4. A351 - Standard Specification for Castings, Austenitic, for Pressure-Containing Parts.
 - 5. A395 - Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures.
 - 6. A479 - Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
 - 7. A515 - Standard Specification for Pressure Vessel Plates, Carbon Steel, for Intermediate - and Higher-Temperature Service.
 - 8. A516 - Standard Specification for Pressure Vessel Plates, Carbon Steel, for Moderate - and Lower-Temperature Service.
 - 9. A536 - Standard Specification for Ductile Iron Castings.
 - 10. A564 - Standard Specification for Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes.
 - 11. A582 - Standard Specification for Free-Machining Stainless Steel Bars

12. A743 - Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.
 13. A890 - Standard Specification for Castings, Iron-Chromium-Nickel-Molybdenum Corrosion-Resistant, Duplex (Austenitic/Ferritic) for General Application
 14. B584 - Standard Specification for Copper Alloy Sand Castings for General Applications.
 15. B691 – Standard Specification for Iron-Nickel-Chromium-Molybdenum Alloys (UNS N08366 and UNS N08367) Rod, Bar, and Wire.
 16. D429 - Standard Test Methods for Rubber Property-Adhesion to Rigid Substrate.
- D. Compressed Gas Association (CGA):
1. Standard G-4.1 - Cleaning Equipment for Oxygen Service.
- E. NSF International (NSF):
1. Standard 61 - Drinking Water System Components - Health Effects.
- F. United States Code of Federal Regulations (CFR):
1. 21 - Food and Drugs.

1.03 SYSTEM DESCRIPTION

- A. Design requirements:
1. General purpose AWWA butterfly valves:
 - a. Design standard: Provide valves designed and manufactured in accordance with AWWA C504.
 - b. Class:
 - 1) Provide butterfly valves in accordance with AWWA Class 150B, unless otherwise specified.
 - 2) Provide butterfly valves in accordance with AWWA Class 250B in piping systems with test pressure greater than 150 pounds per square inch and less than 250 pounds per square inch.
 2. High pressure butterfly valves:
 - a. Piping systems designed for operating pressures greater than 250 pounds per square inch and less than 450 pounds per square inch: Provide ASME B16.5, Class 300 high pressure valves.
 - b. Piping systems designed for operating pressures greater than 450 pounds per square inch: Provide ASME B16.5, Class 600 high pressure valves.
 - c. For
 3. Industrial class butterfly valves:
 - a. Industrial class butterfly valves capable of 150 pounds per square inch leak tight shut off.
 4. Stainless steel butterfly valves:
 - a. Stainless steel butterfly valves capable of a minimum of 450 pounds per square inch leak tight shut off and with special cleaning, packaging, and handling.

- B. Design requirements for all butterfly valves with power actuating devices:
 - 1. Design valves and actuators for maximum operating torque, in accordance with and using safety factors required in AWWA C540, using the following values:
 - a. Maximum water velocity: 16 feet per second with valve fully open.
 - b. Maximum pressure differential across the closed valve equal to the pressure class designation.
 - c. Coefficient for seating and unseating torque, dynamic torque, and bearing friction in accordance with valve manufacturer's published recommendations.
 - 2. Valve disc: Seat in an angular position of 90 degrees to the pipe axis and rotate an angle of 90 degrees between fully open and fully closed positions:
 - a. Do not supply valves with stops or lugs cast with or mechanically secured to the body of the valve for limiting the disc travel.
 - 3. Unacceptable thrust bearings: Do not provide valves with thrust bearings exposed to the fluid in the line and consisting of a metal bearing surface in rubbing contact with an opposing metal bearing surface.
- C. Performance requirements:
 - 1. Tight shutoff at the pressure rating of the valve with pressure applied in either direction.
 - 2. Suitable for the following service conditions:
 - a. Throttling.
 - b. Frequent operation.
 - c. Operation after long periods of inactivity.
 - d. Installation in any position and flow in either direction.

1.04 SUBMITTALS

- A. As specified in Section 40_05_51.01.

PART 2 PRODUCTS

2.01 BFV510 - GENERAL PURPOSE AWWA BUTTERFLY VALVES

- A. Manufacturer: One of the following:
 - 1. M&H.
 - 2. DeZURIK/Sartell Model BAW.
 - 3. Henry Pratt Company.
- B. Valve Body:
 - 1. Material: Cast iron, ASTM A126, Grade B, or ductile iron, ASTM A536, Grade 65-45-12.
 - 2. Body Design:
 - a. Flanged Body Valves:
 - 1) Usage: Comply with limitations specified in the Butterfly Valve Application Schedule.
 - 2) Flanges: ASME/ANSI B16.1 Class 125 flanges for Class 150B valves, ASME/ANSI B16.1 Class 250 flanges for Class 250B valves.

- C. Disc:
 - 1. Material: Cast iron with Type 316 stainless steel edge that matches seat in valve body.
 - 2. Secure valve disc to shaft by means of smooth-sided, taper or dowel pins, Type 316 stainless steel or Monel.
 - 3. Extend pins through full diameter of shaft and mechanically secure in place.

- D. Shaft and Bearings:
 - 1. Shaft Design:
 - a. Valves 20-inch and less: One piece, through disc design.
 - b. Valves greater than 20-inch size: Two piece, stub shaft design.
 - 2. Shaft Seal: Vee type, chevron design.
 - 3. Shaft Material for Class 150B Valves: Type 316 stainless steel, ASTM A276.
 - 4. Shaft Bearings: Self-lubricating sleeve type; Teflon with stainless steel or fiberglass backing.

- E. Seats:
 - 1. Seat Materials:
 - a. In low pressure air applications: EPDM.
 - b. In all other applications: EPDM.
 - 2. For valves 20 inches in nominal size and smaller, bond or vulcanize seat into the valve disc.
 - 3. Resilient Seat: Withstand 75 pound per inch pull when tested in accordance with ASTM D429, Method B.
 - 4. Seat shall be in the valve body.
 - 5.

- F. Valve Packing:
 - 1. Valves 4 inch to 48 inch nominal size: Self-adjusting V-type packing or chevron-type packing EPDM.

2.02 BFV521 - STAINLESS STEEL BUTTERFLY VALVES

- A. Manufacturer:
 - 1. Centerline (Crane), Series 250.
 - 2. DeZURIK BHP.
 - 3. Bray Series 41.
 - 4. Neles-Jamesbury Series 815L.
 - 5. Tyco K-Lok 362.

- B. Valve Body:
 - 1. Material: Type 316 stainless steel, ASTM A351, Grade CF8M.
 - 2. Body Design: Lugged with drilled and tapped bolt holes to match ASME/ANSI B16.5, Class 150 flange drilling dimensions.

- C. Disc:
 - 1. Material: Type 316 stainless steel, ASTM A351, Grade CF8M.

- D. Shaft and Bearings:
 - 1. Shaft: Type 316 stainless steel.
 - 2. Shaft Bearings: Self-lubricating sleeve type, Teflon with stainless steel or fiberglass backing.

- E. Disc Pins: Secure valve disc to shaft by means of solid, smooth-sided, taper or dowel pins, Type 316 stainless steel.
 - 1. Extend pins through shaft and mechanically secure in place.
- F. Seats:
 - 1. Material: Teflon, or Teflon with titanium back-up ring.
 - 2. Seat retainer insert: Type 316 stainless steel.
- G. Valve Shaft Packing:
 - 1. Adjustable V-ring Teflon packing with Type 316 stainless steel packing gland.

2.03 BFV522 - HIGH PERFORMANCE STAINLESS STEEL BUTTERFLY VALVES

- A. Manufacturers: One of the following or approved equal:
 - 1. Flowseal (Crane).
 - 2. Bray Series 43.
 - 3. Tyco K-Lok.
- B. Valve Body:
 - 1. Material: Match adjacent piping.
 - 2. Body Design: Lugged, style body, ANSI Class 300/600, with drilled and tapped bolt holes to match ASME/ANSI B16.1, Class 300/600 flange drilling dimensions.
- C. Disc:
 - 1. 360 degree uninterrupted spherical edge for sealing.
 - 2. Material: Match adjacent piping.
- D. Shaft and Bearings:
 - 1. Shaft: Equivalent with PREN with valve.
 - 2. Shaft Bearings: Self-lubricating sleeve type, Teflon with fiberglass backing.
 - 3. Blowout proof.
- E. Disc Pins: Secure valve disc to shaft by means of solid, smooth-sided, taper or dowel pins. Material to match disc material.
 - 1. Extend pins through shaft and mechanically secure in place.
- F. Seats:
 - 1. Material: Teflon, or Teflon with titanium back-up ring.
 - 2. Seat retainer insert: Material to match valve body.
 - 3. Bi-directional.
- G. Valve Shaft Packing:
 - 1. Chevron design TFE with leakage seal to ASME hydrostatic shell test pressure (150% of C.W.P).
 - 2. Type 316 stainless steel packing gland and gland flange.

2.04 BFV523 - PTFE ENCAPSULATED BUTTERFLY VALVES

- A. Manufacturer:
 - 1. Bray Series 23.
 - 2. Crane, Xomox XLD.
 - 3. Pentair NeoSeal.

- B. Valve Body:
 - 1. Material: Ductile iron, ASTM A395 Gr. 60-40-18.
 - 2. Body Design: Lugged with drilled and tapped bolt holes to match ASME/ANSI B16.5, Class 150 flange drilling dimensions.
- C. Disc:
 - 1. Material: PTFE encapsulated Type 316 stainless steel, ASTM A351, Grade CF8M.
- D. Shaft and Bearings:
 - 1. Shaft: Hastelloy C276, ASTM B575.
 - 2. Shaft Bearings: Self-lubricating sleeve type, Teflon with fiberglass backing.
- E. Disc Pins: Secure valve disc to shaft by means of solid, smooth-sided, taper or dowel pins, Type 316 stainless steel.
 - 1. Extend pins through shaft and mechanically secure in place.
- F. Seats:
 - 1. Material: Teflon.
 - 2. Seat retainer insert: Type 316 stainless steel.
- G. Valve Shaft Packing:
 - 1. Adjustable V-ring Teflon packing with Type 316 stainless steel packing gland.

2.05 BFV530 - THERMOPLASTIC BUTTERFLY VALVES, 1-1/2 TO 16 INCHES

- A. Manufacturers: One of the following or approved equal:
 - 1. ASAHI, Type 57.
 - 2. Equal by Spears Manufacturing.
 - 3. Equal by Hayward Industrial.
- B. Valve Body:
 - 1. Material: PVC.
 - 2. Body Design: Lug style body with drilled and tapped bolt holes to match ASME/ANSI B16.1, Class 125 and Class 150 flange drilling dimensions.
- C. Disc:
 - 1. Disc shall be offset.
 - 2. Material: PVC.
- D. Stem and Stem Holder:
 - 1. Stem: Type 316 stainless steel.
 - 2. Stem Holder: Type 316 stainless steel.
- E. Seats:
 - 1. Material: EPDM.
 - 2. O-rings: EPDM.

2.06 BUTTERFLY VALVE ACTUATORS

- A. Manual actuators for aboveground valves, 4 inches in nominal size and smaller for liquid service, and 10 inches in nominal size and smaller for aeration air service:
 - 1. For valves operating at pressures up to and including 250 pounds per square inch, provide hand lever type with locking device so that the valve can be locked in any position with a wing nut:
 - a. Locking device: Rigid, allowing no vibration or chattering of the valve.
 - b. Hand lever: 12 inches long, with handgrip.
 - 2. For valves operating at pressures above 250 pounds per square inch, provide totally enclosed worm gear actuator mounted on the valve.
- B. Manual actuators for aboveground valves in nominal sizes and in service applications other than specified above, except for valves 30 inches and larger:
 - 1. For valves operating at pressures up to and including 250 pounds per square inch, provide either a totally enclosed worm gear actuator or a totally enclosed traveling nut actuator mounted on the valve.
 - 2. For valves operating at pressures above 250 pounds per square inch, provide totally enclosed worm gear actuator mounted on the valve.
- C. Manual actuators for aboveground valves 30 inches in nominal size and larger, all pressures:
 - 1. Provide totally enclosed worm gear actuator mounted on the valve.
- D. Position indication:
 - 1. For all aboveground worm gear or traveling nut manual actuators, provide position indication on the actuator enclosure.

2.07 COATING

- A. Shop coat interior and exterior metal surfaces of valves, except as follows:
 - 1. Interior machined surfaces.
 - 2. Surfaces of gaskets and elastomeric seats and stem seals.
 - 3. Bearing surfaces.
 - 4. Stainless steel surfaces and components.
 - 5. Thermoplastic surfaces and components.
- B. Coating material for potable water applications:
 - 1. Formulate coating material from materials in accordance with CFR 21.
- C. Field applied coatings:
 - 1. Additional coating of the valve exterior will be required to match the epoxy or epoxy/polyurethane paint system as specified in Section 09_96_01:
 - a. When shop applied finish coating matches field applied coating on adjacent piping, touch up shop coating in damaged areas in accordance with instructions recommended by the paint manufacturer.
 - b. When shop applied coating does not match field coating on adjacent piping, or when damage has occurred to the shop applied coating that requires more than touchup, blast clean valve surfaces or utilize other surface preparation recommended by the manufacturer of the coating material and apply the coating system used for coating adjacent piping.

- D. Surface coatings:
 - 1. Interior surfaces, except for valves used in low-pressure air service: High solids epoxy.
 - 2. Interior surfaces of valves used in low-pressure air service: High temperature coating for range of 150 to 350 degrees Fahrenheit, as specified in Section 09_96_01.
 - 3. Exterior surfaces of valves, actuators, and accessories:
 - a. Submerged valves: High solids epoxy.
 - b. Buried valves: Coal tar epoxy.
 - c. Other valves: High solids epoxy with polyurethane topcoat.
 - 4. Polished and machined surfaces: Apply rust-preventive compound.

- E. Coating materials:
 - 1. High solids epoxy and coal tar epoxy:
 - a. Products: As specified in Section 09_96_01:
 - 1) Coating product in contact with potable water must be in accordance with AWWA C550 and NSF 61.
 - 2. High temperature coating: As specified in Section 09_96_01 and in accordance with AWWA C550.
 - 3. Rust-preventive compound: One of the following or approved equal:
 - a. Houghton, Rust Veto 344.
 - b. Rust-Oleum, R-9.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install valves with valve shafts horizontal, unless a vertical shaft is required to suit a particular installation, and unless a vertical shaft is indicated on the Drawings.
- B. Install pipe spools or valve spacers in locations where butterfly valve disc travel may be impaired by adjacent pipe lining, pipe fittings, valves, or other equipment.

3.02 COMMISSIONING AND PROCESS START-UP REQUIREMENTS

- A. As specified in Section 01_75_17 and this Section.
- B. Manufacturer services from each manufacturer for all valves supplied:
 - 1. As specified in Section 40_05_51.01.
 - 2. Source testing.

END OF SECTION