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June 9, 2014

Mr. Ian Crooks, P.E.
Engineering Manager – Coastal Division
California American Water
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950

Subject: Monterey Peninsula Water Supply Project
Desalination Infrastructure Design-Build – 30% Design Submittal

Dear Mr. Crooks:

The CDM Smith DB Team is pleased to deliver to California American Water the 30% Design Submittal for the Desalination Infrastructure Project. The combined Overall Submittal and Electrical Submittal consist of approximately 180 preliminary drawings and approximately 50 draft specification sections for the major equipment items.

Table 1 on the following page presents the description of the design submittals to date. As the second major technical deliverable for the project, the 30% Design Submittal presents additional information and incorporates the DB Team's responses to CAW's comments on the *Draft Basis of Design Report*, (CDM Smith, April 14, 2014). CDM Smith is currently updating the *Draft Basis of Design Report – Revision 1, 30% Design* and plans to issue the revised BODR no later than June 27, 2014. In addition to responding to CAW's technical comments, CDM Smith will include an updated schedule and revised pricing based on the decisions regarding allowances, alternatives and uncontrolled conditions.

Six hardcopy sets of the 30% Design Submittal (half-size drawings, specifications and DVD) will be sent to:

- California American Water, Pacific Grove, CA (2 copies)
- California American Water, Sacramento, CA (1 copy)
- American Water, Mt. Laurel, NJ (2 copies)
- Trussell Technologies, Inc., Solana Beach, CA (1 copy)
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Table 1. Description of Design Submittals

Text	Drawings
Basis of Design Report/15% Design Submittal (April 14, 2014 or Revised Date TBD)	
▪ Project Description	▪ Topographic Survey of Site
▪ General Project Design Criteria	▪ Preliminary Site Plan showing structures and roadways
▪ RO System Performance Computer Projections	▪ Preliminary Piping Plan
▪ Preliminary Valve Schedule	▪ Preliminary Building Layouts showing equipment location
▪ Preliminary Instrumentation Schedule	▪ Preliminary P&IDs for Treatment and Pumping Systems
▪ Preliminary I/O List	▪ Hydraulic Profiles for treatment and waste processes
▪ Preliminary Pump Curves	▪ Electrical Single Line Diagram
	▪ Single Line Diagram for Medium Voltage Power Distribution
	▪ Preliminary Electrical Load Table
	▪ Preliminary Layout of Medium Voltage Switchgear and 480 Volt Switchboards
	▪ Preliminary Electrical Site Plan
	▪ SCADA Architecture Schematic
30% Overall Design Submittal (June 9, 2014)	
▪ Updated Valve Schedule	▪ Updated versions of drawings in BODR
▪ Updated Instrumentation Schedule	▪ Landscaping Plan
▪ Updated I/O List	▪ Initial versions of Architectural Plans and Sections
▪ Updated Pump Curves	▪ Initial versions of Structural Plans and Sections
▪ Preliminary Control Descriptions	
▪ First draft of Specifications for Division 11, 13, and 15	
30% Electrical Design Submittal (June 9, 2014)	
▪ Initial Electrical Specifications- Division 16	▪ One Line Power Distribution Riser Diagram
▪ Initial Motor Control Center Elevations and Schedules	▪ Electrical Site Plan
▪ Standby Generator Sizing and Interconnection	▪ NEMA Designation Plans for Buildings
▪ Initial Power System Study/Analysis	▪ Power and Lighting Plans

As discussed in weekly meetings/conference calls between CAW and CDM Smith, the design is being prepared with 3-D modeling. As the model continues to be advanced, it will allow viewing of the project components in plan, section or isometric views; facilitate more efficient reviews by CAW staff; and help to reduce potential conflicts between facilities and equipment.

Because of the schedule and budget constraints, additional energy modeling required under the new Title 24 and increased coordination between disciplines with the 3-D design approach compared to traditional 2-D design, it was not feasible for CDM Smith to provide the Initial Building Lighting Plans listed in the table above. The DB Team will continue to develop the design and include the Building Lighting Plans in the 60% Electrical Submittal.



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The 30% Overall and Electrical Submittals are interim, working documents that were prepared in approximately 8 weeks following the delivery of the Draft BODR. The DB Team anticipates more detailed engineering and optimization of the facilities will occur after the Value Engineering recommendations are identified and the changes are incorporated into the 60% Design Submittals scheduled for September 2014. To assist in the review of the 30% Design Submittals, we offer the following information to CAW:

- No major changes in overall site plan, sizing, layout or configuration for major facilities
- Soil mitigation will not significantly impact structural, architectural or mechanical design
- Changes to increase the Treated Water hydraulic grade line from 425 feet to 519 feet are anticipated to be limited to mechanical and electrical equipment, with no changes to building or pump station footprints
- Responses to CAW's comments on the Draft BODR have been incorporated to the extent feasible; some will be deferred to the 60% Design Submittals
- Design is continuing on process piping details for the filters, Cal-Flo system, permeate flush tank, chemical systems and other facilities; additional drawings may be available for review by the VE team or by CAW before the 60% Design Submittals
- Coordination between structural, architectural and building mechanical disciplines has been initiated, but few details included; more comprehensive review expected at the 60% Design
- Pressure reducing valve station and on-site plant/domestic water loop are not shown
- Additional specification sections for major electrical equipment will be provided before VE session
- Specifications are draft at this stage of design; because construction will not begin for approximately 18 months, the equipment models, suppliers and other details may change

Please contact us with any questions and forward CAW's written comments on the 30% Design Submittal to CDM Smith by July 1, 2014. We look forward to meeting with CAW on July 10, 2014 in Pacific Grove to further discuss the 30% Design Submittal and the Desalination Infrastructure.

Sincerely,

A handwritten signature in blue ink that reads 'Paul Meyerhofer'.

Paul F. Meyerhofer, P.E.
Senior Vice President
CDM Smith Inc.

A handwritten signature in blue ink that reads 'Michael A. Zifer'.

Associate
CDM Smith Inc.

cc: Steve Creel, Jack Gallagher, Rich Svindland

