

Exhibit CAW-032D

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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

In the Matter of the Application of
California-American Water Company
(U 210 W) for an Order Authorizing (1) the
Transfer of Already-Incurred Costs for Its
Long-Term Water Supply Solution for the
Monterey District to Its Special Request 1
Surcharge Balancing Account; and (2) An
Annual Review Process for the Transfer of
Pre-Construction Costs to the Special
Request 1 Surcharge Balancing Account

Application No. 08-04-

DIRECT TESTIMONY OF JOHN KLEIN, P.E.

REDACTED

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Attorneys for Applicant
CALIFORNIA-AMERICAN WATER COMPANY

Date: April 10, 2008

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10 **DIRECT TESTIMONY OF JOHN KLEIN, P.E.**

11
12 Q1. Please state your name, business address and telephone number.

13 A1. My name is John Klein. My business address is 511 Forest Lodge Road, Suite 100, in
14 Pacific Grove, CA 93950. My telephone number is (831) 646-3273.

15
16 Q2. By whom are you employed and in what capacity?

17 A2. I have been employed by California-American Water Company ("California American
18 Water") since 2005. I am a Senior Operations Engineer for California American Water's
19 Coastal Division, which includes the Monterey District.

20
21 Q3. Please briefly outline your responsibilities at California American Water.

22 A3. I serve as a Senior Engineering Project Manager in the Monterey office of California
23 American Water. I am responsible for providing the engineering planning, design,
24 installation and project management for the assigned capital projects for the Coastal
25 Division. This includes serving as the Technical Project Manager for the Coastal Water
26 Project.

1 Q4. Describe for the Commission your education.

2 A4. I have a Master of Science in Civil Engineering from the University of California,
3 Berkeley and Bachelor of Science in Civil Engineering from the University of Colorado,
4 Boulder.

5
6 Q5. Please describe your professional experience.

7 I am a registered Professional Engineer in Civil Engineering in the State of California. I
8 am a member of the professional organizations: American Society of Civil Engineers,
9 Water Environment Federation, and American Water Works Association, and the National
10 Engineering Honorary Fraternities of Chi Epsilon and Tau Beta Pi. I worked for the
11 Monterey Regional Water Pollution Control Agency (MRWPCA) for twenty five years as
12 an operations engineer and senior project manager, including serving as the project
13 manager for the design and construction of a regional wastewater system in Monterey
14 County, California serving the Monterey Peninsula, Salinas, and Northern Monterey
15 County. Those facilities consist of 35 miles of pipelines, 10 pump stations, a 30 mgd
16 wastewater reclamation plant, and a deep water ocean outfall.

17
18 Q6. Do you have any other professional experiences?

19 A6. I served for over 30 years as an engineer in the U.S. Navy before retiring from the Naval
20 Reserve at the rank of Captain. I served a total of eight years as a Commanding Officer of
21 several Naval Reserve Units. My active duty assignment was on nuclear submarines and I
22 was the chief engineer responsible for the safe operation and maintenance of a submarine
23 nuclear power plant and submarine systems. I have over 25 years of project management
24 experience in which I managed overhaul and repair work on Navy ships and submarines.

25
26 Q7. What is the purpose of your testimony?

27 A7. The purpose of my testimony is to address the 2007 environmental, permitting and
28 engineering costs for which California American Water is seeking recovery, as

1 summarized in Exhibit A to the Application, entitled Costs Charged to the Coastal Water
2 Project. Part I of my testimony provides an overview of the environmental and
3 engineering work performed and the progress we have achieved on the Coastal Water
4 Project in 2007. Part II of my testimony addresses the charges for engineering,
5 environmental and permitting work, as well as costs associated with construction of the
6 pilot seawater desalination facility located at the Moss Landing Power Plant (MLPP). My
7 testimony also addresses the measures that California American Water management has
8 taken to control the engineering and environmental costs over the course of the last year.

9
10 **I. Overview of the Environmental and Engineering Work Performed on the Coastal**
11 **Water Project in 2007**

12 Q8. Please describe the status of the permitting and environmental review process for the
13 Coastal Water Project through the end of 2007.

14 A8. During 2007, the California Public Utilities Commission (CPUC) and its environmental
15 consultant Environmental Science Associates (ESA) continued their independent
16 environmental review of California American Water's Proponent's Environmental
17 Assessment (PEA) and continued preparing the Environmental Impact Report (EIR) for
18 the Coastal Water Project.

19
20 California American Water devoted resources to the engineering and environmental work
21 for each of the three components of the Coastal Water Project: (1) desalination; (2)
22 conveyance; and (3) aquifer storage and recovery (ASR), in order to support the EIR
23 being developed by the CPUC, and to prepare data required for long-lead permit items.
24 With respect to environmental activities, California American Water responded to
25 informational requests from the CPUC for each of the three project components. In late
26 2006, the CPUC EIR team issued Data Request 2 (DR2), which requested further
27 engineering analysis of the PEA North Marina Alternative ("NMA"), as well as other
28 potential project alternatives for the CPUC to analyze in the EIR. Throughout 2007,

1 California American Water continued discussions with the CPUC to determine the scope
2 and necessity of the requested engineering analysis and whether such analysis was
3 necessary for the CPUC to complete the EIR analysis required by the California
4 Environmental Quality Act (CEQA). In response to DR2, California American Water met
5 with Monterey County Water Resources Agency to determine the feasibility of locating
6 the desalination plant near Armstrong Ranch and utilizing intake wells to obtain seawater
7 or brackish groundwater to feed the plant. The parties agreed that near-shore modeling
8 would demonstrate whether or not it would be technically and institutionally feasible for
9 California American Water to implement this subsurface intake technology. California
10 American Water selected Geoscience Support Services, Inc. to provide the
11 hydrogeological modeling of the coastal substrata.

12
13 In DR2, the CPUC EIR team directed California American Water to provide additional
14 information and analysis on potential alternatives to Coastal Water Project features that
15 California American Water originally proposed in the PEA. California American Water
16 completed the requested analysis and provided information to the CPUC and ESA on
17 project alternatives. The CPUC EIR team requested information on the following topics:

- 18
19 • Potential of sharing conveyance infrastructure between California American
20 Water and the Marina Coast Water District within the City of Marina and the
21 former Fort Ord for combined delivery of desalinated water and Marina Coast
22 Water District well water to the California American Water service area,
23
- 24 • Inclusion of the alternative pipeline alignment (the "Monterey Pipeline") in the
25 EIR, and
- 26
27 • Potential operational changes to the ASR component of the Coastal Water Project
28 due to the Adjudication of the Seaside Groundwater Basin.

1 In support of the EIR development, California American Water also coordinated with the
2 CPUC and ESA to provide additional details on permanent and temporary (construction)
3 impacts on visual resources, air quality, noise, and traffic.
4

5 In addition to supporting the development of the EIR, California American Water
6 performed other environmental and permitting activities during 2007, including:
7

- 8 • Continuing with the focused biological surveys to support long-lead permit items;
9
- 10 • Coordination of the pilot plant activities with the Central Coast Regional Water
11 Quality Control Board (CCRWQCB) for National Pollutant Discharge
12 Elimination System (NPDES) permit discharge activities;
13
- 14 • The California Department of Public Health (CDPH) for Watershed Sanitary
15 Survey and pilot plant test plan to support drinking water permit application
16 protocol;
17
- 18 • Monitoring and sampling of the Moss Landing Harbor water during the harbor
19 dredging;
20
- 21 • Ongoing coordination with the City of Seaside, U.S. Army Presidio of Monterey
22 Directorate of Public Works, U.S. Army Fort Ord Base Realignment and Closure
23 Commission (BRAC), Fort Ord Reuse Authority (FORA) regarding Coastal
24 Water Project conveyance and ASR facilities on the former Fort Ord within the
25 Seaside city limits, including preparation of Land Use Permits and Easements for
26 ASR test and monitoring well facilities; and
27
28

- Ongoing discussions with the Monterey Peninsula Water Management District (MPWMD) and the CCRWQCB regarding planned ASR operations and the State Board's policies for anti-degradation of groundwater basins.

1
2
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4
5 Q9. Please describe the status of the pilot seawater desalination plant for the Coastal Water
6 Project.

7 A9. California American Water successfully completed the construction of the pilot plant in
8 the summer of 2007, despite additional unexpected permit delays during the first half of
9 the year. As detailed in *California American Water's Report on the Reasonableness of*
10 *Coastal Water Project Preconstruction Costs Incurred Through December 31, 2006*,
11 submitted in A.04-09-019, dated March 2007, ("2006 Report") the California Coastal
12 Commission approved the Coastal Development Permit (CDP) for the pilot plant at Moss
13 Landing at the December 2006 public hearing, overturning the California Coastal
14 Commission's own staff recommendation to deny approval of the permit. During the first
15 half of 2007, California American Water continued discussions with the California
16 Coastal Commission to develop and finalize the CDP findings.

17
18 In January 2007, project opponents filed a lawsuit against Monterey County agencies and
19 the California Coastal Commission alleging that they violated County Health and Safety
20 Code Section 10.72 when they issued permits for the pilot plant. Section 10.72 requires
21 desalination plants be publicly owned. County officials had determined in 2005 that the
22 ordinance only applied to desalination plants that would produce drinking water and did
23 not apply to pilot (test) facilities. The project opponents filed an injunction to halt
24 construction until the outcome of the lawsuit. Ultimately, the Court denied the injunction
25 and California American Water continued pilot plant pre-construction activities.

26
27 In early 2007, the California Energy Commission (CEC) required the MLPP to amend its
28 operating permit in order for the pilot plant to operate while connected to their facilities.

1 The owner of the MLPP directed California American Water to postpone construction of
2 the pilot plant until further notice. In the late spring, MLPP advised that California
3 American Water could proceed with construction while the permit modification was
4 pending, however, the pilot plant could not physically connect to MLPP facilities and
5 operate before the permit modifications. In August 2007, the CEC held a public hearing
6 and unanimously approved the permit modification.

7
8 In the meantime, California American Water selected a general contractor, Granite
9 Construction, and an electrical contractor, Darrel Varni Electric, to construct and equip the
10 pilot plant facility. Both of the contractors were pre-qualified and held master task
11 agreements with California American Water. Task directives were prepared for the
12 contractors to complete the installation of the pilot plant on a time and materials (T&M)
13 pay basis. As a cost control measure, California American Water obtained an update to
14 the pilot plant construction cost estimate from a professional cost estimating firm, Sierra
15 Consulting Group. This firm had prepared the original construction cost estimate for the
16 Coastal Water Project in 2004 and the pilot plant equipment in 2005.

17
18 The MLPP owner required California American Water to staff a construction liaison and
19 security personnel during the construction period. RBF Consulting, program manager of
20 the pilot plant construction project, contracted and paid for both of these entities. The
21 construction liaison, whom MLPP appointed, was a previous MLPP employee who would
22 serve to observe construction activity and ensure that all parties followed the safety
23 protocol. The security personnel allowed construction and deliveries crews to gain access
24 to the site through a side entrance and thus avoid the daily check-in/ check-out security
25 procedures typically required at the main gate. Although the staffing of the construction
26 liaison and security added cost to the pilot plant construction budget, it actually increased
27 the overall efficiency of the implementation process and proved to be beneficial. In June
28 of 2007, construction of the pilot facility began, and was substantially completed in

1 August, about two months ahead of the originally-estimated construction schedule.
2 California American Water not only credits the construction liaison and the security
3 personnel, but the teamwork of California American Water, American Water Pridesa, the
4 construction contractors Granite Construction and Darrel Varni Electric, and the program
5 and construction manager RBF Consulting for achieving this milestone.

6
7 The pilot facility, as designed by American Water Pridesa, was equipped with a Memcor
8 membrane filtration skid. In order to add flexibility during the testing phase, California
9 American Water installed a second pretreatment skid in order to test and compare
10 alternative membrane pretreatment vendors. California American Water installed a Norit
11 membrane filtration system at the second skid. Layne Christensen provided the Norit
12 equipment and operations monitoring services at no cost to California American Water.

13
14 During the construction period, California American Water utilized the pilot plant trailer,
15 which it had delivered to the site and outfitted to support pilot plant operations office and
16 laboratory work. California American Water held technical workshops with the pilot
17 plant operations staff, composed of employees of both American Water and Acciona Agua
18 (formerly Pridesa), the program managers (RBF Consulting), and design engineers to
19 finalize the operations work planning. The team also coordinated with the CDPH to
20 finalize the drinking water permit test and monitoring plan.

21
22 In 2006, California American Water enrolled the pilot plant in the CCRWQCB's General
23 NPDES Permit for Discharges with Low Threat to Water Quality (General Permit). In
24 2007, the CCRWQCB renewed and revised the monitoring requirements of the General
25 Permit. Due to the physical limitations of sampling locations near the pilot plant facility
26 at Moss Landing, California American Water requested a slight modification to the
27 monitoring requirements. These discussions with CCRWCQB continued through the end
28 of 2007.

1 In the Fall of 2007, California American Water requested proposals for professional
2 services from qualified engineering firms to provide technical support in developing an
3 operations testing plan for the pilot plant facility. The scope of work included preparation
4 of a detailed work plan to govern the actual operation of the pilot plant; provide process
5 engineering support for evaluation of data and testing during the pilot test period; and,
6 preparation of final pilot testing report. In a selective competitive bid process, a selection
7 panel consisting of California American Water and American Water team members
8 selected the firm MWH to provide these services.

9
10 In the second half of 2007, the site lease for the pilot plant expired and required
11 renegotiation of terms for renewal between Dynegy (the power plant owner) and
12 California American Water. Dynegy prohibited the use of chemicals required to start-up
13 and commission the pilot plant's treatment systems at the site until the lease agreement
14 was renegotiated. As a result, California American Water could not initiate start-up
15 activities of the pilot plant. While Dynegy and California American Water processed the
16 lease agreement renewal, the pilot plant operations staff was able to exercise and perform
17 limited checkout and testing of the pumps and equipment. Start-up and commissioning
18 activities continued into 2008.

19
20 Q10. Please describe the status of the ASR portion of the Coastal Water Project.

21 A10. During 2007, California American Water continued to develop and define the Coastal
22 Water Project ASR Program. ASR Systems completed a technical analysis of the Seaside
23 Groundwater Basin in order to locate sites for monitoring, test and permanent ASR well
24 facilities. ASR Systems collectively referred to these sites as being located within the
25 "Sweet Zone." California American Water then pursued conversations with the U.S.
26 Army, the City of Seaside, the FORA and landowners to determine the availability land
27 for ASR facilities within the Sweet Zone. California American Water selected the
28 Bayonet Site to locate ASR test and monitoring facilities.

1 To move the ASR program forward in a cost-effective manner, California American
2 Water elected to phase the ASR test and monitoring program. California American Water
3 would first construct ASR Monitoring Well No. 1 (MW-1), and use geological data to
4 determine if it should proceed with completion of an ASR test well. California American
5 Water then prepared preliminary design for the Bayonet Site, which incorporated the
6 locations of the monitoring wells, test well, and permanent ASR wells. California
7 American Water completed specifications and contract documents for the drilling of MW-
8 1 and selected a well drilling contractor through a competitive-bidding process.

9
10 Additionally, California American Water has received the necessary permits from the
11 Monterey County Department of Health and CCRWQCB, and has received a right-of-
12 entry permit for the Bayonet Site from the U.S. Army.

13
14 In 2007, California American Water also held meetings with the City of Seaside to discuss
15 siting and permitting of Coastal Water Project facilities within City limits and within the
16 former Ford Ord, and to coordinate with the City's development plans. Additionally,
17 California American Water held coordination meetings with FORA and the Marina Coast
18 Water District to discuss the potential to share water infrastructure that California
19 American Water will be constructing within the newly realigned General Jim Moore
20 Boulevard.

21
22 In 2007, California American Water continued to support the MPWMD's Phase 1 ASR
23 Project as they successfully drilled a second ASR injection well at their Santa Margarita
24 site. Although these facilities are separate from the Coastal Water Project, California
25 American Water will ultimately connect to and utilize these facilities as part of Coastal
26 Water Project operations. The Direct Testimony of Tom Bunosky will provide additional
27 details on this effort.

1 Q11. Please provide a summary of the conveyance component of the Coastal Water Project.

2 A11. During the beginning of 2007, California American Water held a kick-off meeting with
3 the conveyance facilities design consultant, Parsons. However, at the discretion of
4 California American Water, Parsons' assignments were minimized due to the delays and
5 uncertainties associated with the CPUC's EIR schedule. Parsons completed a peer-review
6 of RBF Consulting's initial Monterey Pipeline analysis.

7
8 In general, conveyance activities were limited to responding to informational requests in
9 support of the EIR.

10
11 **II. Engineering and Environmental Costs**

12 Q12. Please provide a summary of the engineering and environmental costs incurred by
13 California American Water for the Coastal Water Project in 2007.

14 A12. For a summary of the engineering charges please see the Coastal Water Project Charge
15 Exhibit, attached as Exhibit A to the Application. California American Water allocated
16 the engineering and environmental costs in 2007 to one of the three Coastal Water Project
17 charge components (desalination, ASR, and conveyance). California American Water
18 based the charges to components on the type of actual work performed.

19
20 Q13. Provide a summary of vendors and services or products provided in connection with the
21 engineering and environmental costs incurred by California American Water for the
22 Coastal Water Project in 2007.

23 A13. The following table details the vendors who provided engineering and environmental
24 services or products for the Coastal Water Project for which California American Water
25 incurred costs in 2007. Copies of each invoice from these vendors are attached hereto as
26 Attachment 4, in the order presented in the following table.

Vendor*	Service or Product Provided
American Water Pridesa, LLC	Continued pilot plant installation and operations services, participation in Summer 2007 Pilot Plant Workshop
ASR Systems, LLC	Engineering design services for the ASR component of the Coastal Water Project to support permitting and design of the ASR wells
Bradley & Sons	Mobilization and liability insurance for the ASR monitoring well
Darrel Varni Electric, Inc.	Installation and programming of pilot plant electrical components
California Public Utilities Commission**	Preparation of the Environmental Impact Report
Granite Construction Co.	General contractor for construction of the pilot plant
Monterey County Building and Planning Department	Building permit fees
Parsons Water and Infrastructure, Inc.	Engineering design services for project planning, long-lead permitting and right-of-way acquisition for conveyance facilities
PG&E	Electrical service for the pilot plant
RBF Consulting	Engineering and environmental/permitting services, program management support. Construction management for pilot plant
Sierra Consulting Group, Inc.	Third party pilot plant construction cost estimate
Williams Scottsman, Inc	Laboratory and office trailer rental for pilot plant
U.S. Army Corps of Engineers and U.S. Treasury	ASR Permit fees
State Water Resources Control Board	Waste Discharge permit fee

*Vendors and products listed are those paid directly by California American Water. The list above does not indicate vendors or products provided under subagreements with above listed vendors.

**California American Water reimbursed the California Public Utilities Commission for services rendered by ESA and other charges in connection with the preparation of the Environmental Impact Report.

Q14. Please describe how California American Water incurred costs in 2007 for the CPUC's development of the EIR for the Coastal Water Project.

A14. Since 2006, the CPUC's environmental consultant, ESA, has been assisting the CPUC in its independent environmental review of the Coastal Water Project and preparation of the

1 EIR. ESA submits invoices for payment of its services to the CPUC and the CPUC
2 directly pays ESA. In turn, the CPUC then submits invoices to California American
3 Water for all EIR related costs. The invoices California American Water received include
4 reimbursement to the CPUC for ESA's charges, as well as the CPUC charges for its own
5 staff time and expenses. California American Water provides the payments to CPUC and
6 then allocates the costs to the Coastal Water Project amongst the three business units:
7 05400410 (Desalination); 05400411 (ASR); and, 05400412 (Conveyance). In 2007,
8 California American Water incurred \$338,066.19 in direct charges from the CPUC for its
9 preparation of the Coastal Water Project EIR.

10
11 Q15. Briefly describe the services RBF Consulting provided during 2007.

12 A15. RBF continued to provide services under the September 2006 Work Order Addendum for
13 Miscellaneous Additional Environmental and Engineering Services (Addendum 1),
14 Contract No. M0633.¹ Although California American Water originally estimated that the
15 budget for Addendum 1 would extend RBF's services for a six-month period, RBF was
16 able to continue to provide services through August 2007 due to reduced staff-level efforts
17 and schedule delays in the overall project implementation. The total costs for RBF's
18 services provided in 2007 are \$1,156,363.88. A list of services RBF and their
19 subconsultants provided, organized by task number, by month, is included in the table
20 attached hereto as Attachment 1.

21
22 Beginning in the summer of 2007, RBF Consulting provided construction management
23 services during the construction of the pilot plant. RBF's construction manager provided
24 daily, onsite support during the bulk of the construction phase. The construction

25 ¹ This Application addresses services that RBF Consulting provided from October 1, 2006
26 through August 31, 2007 (costs incurred previous to October 1, 2006 were discussed in the 2006
27 Reasonableness of Costs Report submitted in A.04-09-019 and costs for services performed
28 September through December 2007 will be submitted for reasonableness review as part of
California American Water's report on its 2008 costs).

1 manager's typical activities included coordinating construction drawing revisions with the
 2 County Building officials, scheduling and coordinating materials deliveries, scheduling of
 3 special inspections and tests, and providing general oversight to ensure that the facility
 4 was being correctly installed per the drawings and specifications. In addition, the
 5 construction manager routinely coordinated construction activities through the MLPP
 6 liaison to ensure pilot plant activity did not interfere with MLPP operations. The
 7 construction manager also verified the work performed and materials utilized by the
 8 contractors and approved the invoices to be submitted to California American Water for
 9 payment.

10
 11 Q16. You mentioned that vendors or subconsultants of RBF Consulting provided some of the
 12 services. Please further describe the services or products provided by vendors or
 13 subconsultants utilized by RBF and explain how California American Water charged
 14 those costs to the Coastal Water Project.

15 A16. RBF Consulting paid several subcontractors and vendors directly to provide services or
 16 products for the Coastal Water Project. California American Water then reimbursed RBF
 17 the direct costs the subcontractors and vendors charged to RBF. In accordance with the
 18 task order, RBF does not charge a markup on its subconsultants and products. The table
 19 below indicates the subcontractors and vendors RBF utilized, and the total dollars RBF
 20 paid to each.

21

Vendor/ Subconsultant	Services Provided	Total Cost
DTN Engineers	Pilot Plant electrical design and ongoing construction support	\$13,555.26
Granite Construction ¹	Participated in MLPP Safety Training. Coordinated pilot plant equipment delivery and unloaded the equipment from the shipping trucks.	\$12,134.65
Kleinfelder	Prepared Pilot Plant Geotechnical Report for Monterey County Building Permit.	\$800.00

1	RosTek Associates	Pilot Plant design and Test Plan preparation support	\$6,803.08
2			
3	Ted Ursino	MLPP Construction Liaison during pilot plant construction	\$7,665.00
4			
5	Guardsmark ¹	Provided security and gate-access during pilot plant construction	\$5,798.20
6	Universal Field Services	Property appraisals for ASR facilities	\$2,104.86
7	Robert S. Jaques ²	Specialized right of way and site acquisition support for ASR facilities in Seaside	\$2,214.79
8			
9	Geoscience Support Services	Hydrogeological support for desalination plant subsurface intake alternatives. Participated in meetings with EIR team and assisted RBF with preparing initial responses to CPUC EIR Data Request 2	\$5,964.00
10			
11	Archibald Consulting	Watershed Sanitary Survey	\$5,424.60
12			
13	Flow Science	Discussions with EIR consultant Re: brine discharge flow modeling. Assisted with providing responses to CPUC EIR Data Request Marine 1	\$16,631.37
14			
15	Denise Duffy and Associates	Spring blooming and aquatic surveys, discussions with USFWS regarding Red Legged Frog /California Tiger Salamander habitat assessment	\$37,152.50
16	Ron Shelton	Program controls and scheduling advising services to transfer CWP schedule from MS Project to Primavera	\$8,360.00
17			
18	Kinnetic Laboratories	Evaluate source water and receiving water impacts to support responses to CPUC EIR data requests.	\$4,109.20
19		Total	\$128,717.51

1. Payment to vendor as direct-expense to project.
2. Contract employee to RBF Consulting

Attachment 2 provides copies of agreements established in 2007 between RBF Consulting and their subcontractors, including the agreement with Ronald Shelton and the agreement with Ted Ursino.

Q17. Please describe the services ASR Systems provided during 2007.

A17. ASR Systems provided services per its contracted scope of work to develop the Coastal Water Project ASR test and monitoring program and prepare the design and specifications

1 for permanent, full-scale Coastal Water Project ASR wells. The total cost incurred by
 2 California American Water in 2007 for services provided by ASR Systems is
 3 \$309,258.22. Please refer to Attachment 3 for a detailed description of these services.
 4

5 Q18. Please describe the services subconsultants of ASR Systems provided in 2007.

6 A18. Please refer to the table below for a description of services and associated costs of ASR
 7 Systems' subconsultants.
 8

Firm	Services Provided	Total
Pueblo Water Resources	Hydrogeological investigation of Seaside Groundwater Basin for siting ASR wells. Preparation of engineering documents and specification for test/monitoring well and full-scale wells.	\$94,797.18
Bestor Engineers	General engineering/ drafting support.	\$4,904.06
Hydrometrics	QA/QC, Peer review of technical reports	\$1,946.76
Total		\$101,648.00

15
 16 Q19. What measures has California American Water taken to ensure that services rendered by
 17 its technical consultants and contractors are prudent and benefit California American
 18 Water's customers?
 19

20 A19. California American Water takes several measures to ensure that its technical consultants
 21 and contractors provide services that are prudent and benefit customers. First, California
 22 American Water considers qualifications required and associated costs of the services it
 23 requests of consultants and contractors. California American Water and American Water
 24 executives and technical experts selected all engineering and environmental services
 25 consultants through a competitive evaluation process that considers the technical
 26 qualifications and scope along with their proposed cost of providing the services.
 27
 28

1 The scopes of services and associated budgets for each task that the consultants are
2 providing for the Coastal Water Project are identified in a Task Order issued by California
3 American Water to the consultant. The list of tasks is coordinated with the overall project
4 schedule and budget. California American Water held monthly meetings or conference
5 calls with consultants to track project progress. Consultants must provide detailed monthly
6 invoices for their services and include work progress descriptions to support the charges.

7
8 During 2007, California American Water developed and issued one Request for Proposal
9 for Coastal Water Project technical services. California American Water selected MWH
10 through the above-described process to provide operations testing assistance for the pilot
11 plant.

12
13 In addition, California American Water competitively bid the drilling of the ASR
14 monitoring well during the summer 2007. California American Water held a non-
15 mandatory pre-bid conference and bidders submitted their sealed bids. California
16 American Water then selected the contractor who submitted the lowest bid and who met
17 all requirements set forth in the contract documents and specifications.

18
19 As previously described, both Darrel Varni Electric and Granite Construction Co. held
20 existing master task agreements with California American Water, and therefore California
21 American Water did not utilize a competitive-bid selection process for the pilot plant
22 construction. Both contractors submitted scopes of work and fee proposals to California
23 American Water for work specific to the pilot plant construction. California American
24 Water prepared task orders and paid both Granite Construction and Darrel Varni Electric
25 on a time-and-materials basis with not-to-exceed limits. RBF Consulting provided
26 construction management services during the pilot plant installation to oversee and verify
27 the services provided by contractors. The construction manager verified that construction
28 contractors' daily charges were for services and materials actually provided, and that the

1 contractors performed work correctly and in accordance with the plans and specifications.
2 The construction manager submitted the invoices to California American Water along
3 with a recommendation whether California American Water should accept and pay the
4 invoices.

5
6 In late 2007, California American Water selected Geoscience Support Services, Inc. to
7 prepare and complete the hydrogeologic modeling for the North Marina Alternative as
8 requested in EIR Data Request 2.5. In early 2007, RBF Consulting prepared and provided
9 a scope and fee estimate to complete the work outlined in EIR Data Requests 2.4, 2.5, and
10 2.6. As part of their proposal, RBF selected Geoscience to perform the hydrogeological
11 investigation. Geoscience had performed the initial hydrogeological modeling of
12 horizontal directionally drilled (HDD) wells as subsurface alternative intakes for the
13 desalination plant that California American Water described in the PEA. Because of
14 Geoscience's unique knowledge and experience of the Coastal Water Project, California
15 American Water negotiated a contract directly with Geoscience, thus allowing the
16 Company to have direct control over the scope, budget, and schedule for the modeling
17 work.

18
19 During 2007, California American Water revised the procedure for which it prepares and
20 authorizes contract addendums for the ongoing services RBF Consulting provides.
21 California American Water now defines the scopes of work and budget on a quarterly
22 basis in order to better estimate and control costs for activities that are currently occurring
23 and for those anticipated to occur in the near-term. California American Water
24 implemented this new contracting procedure due to project delays in the EIR and
25 unforeseen project events.

1 Q20. What measures has California American Water taken to track actual-to-planned progress
2 in Coastal Water Project schedule and budgeting?

3 A20. In 2007, California American Water authorized RBF Consulting to transfer the Coastal
4 Water Project schedule from MS Project (software) format to Primavera Project
5 Management (database) format in order to increase capabilities to manage and control the
6 schedule and budget. RBF prepares an annual budget for the tasks it anticipates to
7 perform in the upcoming year. RBF regularly updates and maintains and updates the
8 Coastal Water Project schedule, and each quarter it tracks actual budget and schedule
9 progress against the planned progress. California American Water adjusts the annual
10 budget accordingly to progress or delays in the schedule.

11
12 The schedule has been a powerful tool in assisting California American Water track
13 progress and delays of Coastal Water Project activities, including those related to the pilot
14 plant and EIR, and provides California American Water with a tool for authorizing,
15 controlling and justifying the scopes and budgets for services provided by consultants.

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Q21. Does this complete your direct testimony?

A21. Yes, it does.

ATTACHMENT 1

Services Provided by RBF Consulting

Task #	Task Description	Work Performed
October 2006		
3	Pilot Plant Program Mgmt	* Prepared response to comments on Pilot Plant Building Permit application
4	Meetings & Presentations	* Monthly CWP team meeting, including agenda, pre-read and action item preparation
		* Kick-off meeting with ASR Consultant team
6	CPUC Coordination and Clarification	* Held CPUC EIR coordination meeting regarding systems operations issues and existing infrastructure constraints
		* Prepared memo to CPUC EIR team regarding Marina Coast Water District infrastructure sharing and water-wheeling concept
8	Watershed Sanitary Survey	* Review of existing water quality data
9	Receiving Water Modeling and Flow Science Modeling	Payment to FlowScience for June meetings on Data Request 1 (brine discharge modeling)
10	Permitting Coordination	* Discussions with Coastal Commission staff (Tom Luster) on December Pilot Plant Coastal Development Permit hearing
11	Focused Surveys	* Meeting with Denise Duffy & Associates to review site assessment and Red Legged Frog/ California Tiger Salamander survey reports
12	Unidentified Scope of Services	* Continued evaluation of routing alternatives to Segunda Pipeline
		* Met with Presidio of Monterey developer Clark Realty regarding ASR test and monitoring well siting
		* Provide comments/feedback on Petition for Change to Permits 7130B and 20808 for ASR Facilities and Operations

		* Prepared white paper issues summary related to seawater desal vessel concept being proposed by Water Standard Company/ PBS&J
		* Prepared initial ASR pipeline extension analysis
15	Program Management Support	* Prepared Monthly Report
		* Weekly task & action items update with John Klein
		* Project File Maintenance
November 2006		
3	Pilot Plant Program Mgmt	* Prepared Geotechnical Report, tank specifications & other miscellaneous information for PPF Building Permit
4	Meetings & Presentations	* Meetings to prepare for December Coastal Commission hearing on the Pilot Plant appeal of the Coastal Development Permit
		* Monthly CWP team meeting, including agenda, pre-read and action item preparation
5	Right-of-Way Acquisition Services	* Right-of-way appraisals and acquisitions are being initiated for the southern portion of the CWP (ASR, storage and conveyance facilities).
6	CPUC Coordination and Clarification	* Finalized October CPUC EIR team meeting minutes
8	Watershed Sanitary Survey	* Conference call with Elaine Archibald to discuss status of the pilot plant (subconsultant on WSS)
10	Permitting Coordination	* Preparation for December Coastal Commission hearing regarding the Pilot Plant Coastal Development Permit
11	Focused Surveys	* Meeting with USFWS on Site Assessment and Red Legged Frog/ California Tiger Salamander Survey reports
		* Denise Duffy and Associates attendance of CPUC EIR coordination meeting
12	Unidentified Scope of Services	* Finalized Segunda Pipeline Contingency Plan and summary of Monterey pipeline alternative pros & cons

		* Met with Army/Presidio of Monterey to discuss Right-of Entry requirements for the Bayonet Dr. for ASR test and monitoring wells.
15	Program Management Support	* Prepared Monthly Report
		* Weekly task & action items update with John Klein
		* Project File Maintenance
		* Met with ASR Consultant team to review ASR site selection criteria and data collection
		* Met with Clark Realty on potential Bayonet Drive ASR site and initiated negotiations for property acquisition or easements
		* Prepared an addendum to the Geotechnical RFP
December 2006		
3	Pilot Plant Program Mgmt	* Pilot Plant Facility (PPF) pre-construction and installation coordination with MLPP, Monterey Co., and construction contractors
		* Preparation of PPF construction schedule and detailed work plan to move pilot plant forward once Coastal Development Permit obtained
4	Meetings & Presentations	* Upon approval of the CCC approval of the Coastal Development Permit, held meetings to prepare for the February Coastal Commission Hearing regarding the CCC findings on the appeal of the Coastal Development Permit for the PPF.
		* Held a meeting with ASR Systems to discuss Technical Memos 1 and 2 concerning the location and design of ASR test and monitoring wells.
		* Met with City of Seaside regarding the location of the test and monitoring wells at Bayonet Drive and development of ASR project.
		* Monthly CWP team meeting, including agenda, pre-read and action item preparation

5	Right-of-Way Acquisition Services	* Coordination with Universal Field Services for southern project area appraisals
6	CPUC Coordination and Clarification	* Prepared responses to Data Request 2 from the CPUC EIR team regarding pipeline alignments, subsurface intakes, and other potential engineering analysis to support the EIR process.
		* Held CPUC EIR coordination meeting regarding biological resources and Data Request 2.
		* Finalized technical memorandum regarding Segunda Pipeline Alignment Contingency Alternatives analysis for discussion with management and submission to CPUC EIR Team per data request 2.
8	Watershed Sanitary Survey	* Conference call with Elaine Archibald (subconsultant on WSS) to discuss planned pilot plant construction and operation schedule and to coordinate WSS activities
		* Coordination with DHS to finalize Water Sampling and Monitoring Plan requirements
9	Receiving Water Modeling and Flow Science Modeling	Preparation of Data Request 2 response on MRWPCA outfall modeling
10	Permitting Coordination	* Preparation for and attendance of Coastal Commission Appeal of Pilot Plant facility, including preparation of the administrative record and correspondence with the CCC
11	Focused Surveys	* Invoice from DDA for Site Assessment and survey reports
12	Unidentified Scope of Services	* Prepared and submitted Right of Entry letter to US Army requesting access to install ASR test and monitoring wells on Bayonet Drive.
		* Met with City of Seaside regarding the location of the test and monitoring wells at Bayonet Drive and development of ASR project.

15	Program Management Support	* Updated 2007 schedule and budget for January accruals.
		* Capital Cost O&M trends analysis
		* Weekly task & action items update with John Klein
		* Prepared Monthly Report
		* Held kickoff meeting with conveyance consultant (Parsons).
		* Reviewed Draft ASR Tech Memos 1 & 2
		* Project File Maintenance
January 2007		
3	Pilot Plant Program Mgmt	Initiated Pilot Plant Facility (PPF) construction coordination, including meeting with Darrel Varni (electrical contractor) and DTN (electrical engineer).
		Updated PPF construction implementation schedule and detailed pre construction workplan.
		Invoice paid to DTN for electrical engineering services for Pilot Plant construction drawings.
4	Meetings & Presentations	Prepared for February Coastal Commission meeting regarding the CCC findings on the appeal of the Coastal Development Permit for the PPF.
		Held kickoff meeting with conveyance consultant (Parsons).
		Monthly progress meeting on 1/9/07.
6	CPUC Coordination and Clarification	Held CPUC EIR coordination meeting regarding biological resources and Data Request 2
		Finalized technical memorandum regarding Segunda Pipeline Alignment Contingency Alternatives analysis for Data Request 2 submittal

		Submitted Data Request 2 response regarding scope of work for additional North Marina Alternative investigations on January 16, 2007.
8	Watershed Sanitary Survey	Meeting with Elaine Archibald on water sampling implementation concurrent with PPF testing operations. Invoice paid to Elaine Archibald for services October 2006 through January 2007, including review of existing water quality data and project management.
10	Permitting Coordination	Reviewed revised findings by Coastal Commission from 12/14/06 hearing on PPF and provided suggested revisions.
12	Unidentified Scope of Services	Coordinated with Corollo Engineers on preliminary analysis of facility requirements for CPUC's MCWD water transfer/exchange alternative
15	Program Management Support	Updated 2007 schedule and budget for January accruals and first quarter budget re-forecast. Held full day meeting with ASR Systems to discuss Technical Memos 1 and 2 concerning the location and design of ASR test and monitoring wells. Met with City of Seaside regarding the location of the test and monitoring wells at Bayonet Drive and provided materials on facility screening and conjunctive use of ASR with recreational facilities. Monthly status report. Assisted with preparation of CWP Advisory committee meeting materials.
February 2007		
3	Pilot Plant Program Mgmt	Coordination with MLPP on the Pilot Plant Facility (PPF) construction and installation.
		Provided construction drawings and design information with J.R. Conkey for their preparation of an independent PPF construction cost estimate.
4	Meetings & Presentations	Met with Carmel Development Company to share Data Request 2 response on Monterey Pipeline Alternative.
		Monthly progress meeting on 2/20/07.
5	Right-of-Way Acquisition Services	Met with Universal Field Services on appraisals for southern project area and initiated work on ASR property acquisition.

		Prepared draft letter of intent to Clark Realty for Bayonet Dr. site and sent to CAW legal/ROW for internal review.
6	CPUC Coordination and Clarification	Submitted additional response to Data Request 2 regarding ASR conveyance pipeline alignments in the southern portion of the project area on February 15, 2007. This response introduced the Monterey Pipeline Alternative, which will be fully analyzed in the EIR.
		Held CPUC EIR coordination meeting on Data Request 2 responses
		Attended DRA Regional project exploration meetings.
		Held meetings with Monterey County, Marina Coast Water District and the Monterey Regional Pollution Control Agency regarding the study of the North Marina Alternative as requested by CPUC in Data Request 2.
		Continued preliminary analysis of facility requirements for CPUC's MCWD water exchange alternative, as requested in Data Request 2.
8	Watershed Sanitary Survey	Existing water quality data collection and review.
10	Permitting Coordination	Prepared draft information for MLPP to submit a minor permit amendment request to the California Energy Commission.
		Attended February Coastal Commission meeting regarding the CCC findings on the appeal of the Coastal Development Permit for the PPF.
11	Focused Surveys	Reviewed Site Assessment report and provided comments to biologist (Denise Duffy and Associates)
		Met with biologist to coordinate spring plant surveys.
13	Project Plan Preparation	Implementation of project scheduling into Primavera software.
15	Program Management Support	Monthly status report.
		Continued working on the right of entry letter to US Army requesting access to install ASR test and monitoring wells on Bayonet Drive.
		Reviewed revised ASR Technical Memos 1 and 2 based on input from January meetings.

		Carollo to provide diagrams of system to RBF and explain/identify concept and facilities.
		Weekly project management meetings with John Klein.
March 2007		
3	Pilot Plant Program Mgmt	Pilot Plant building permit follow-up coordination.
		Updated schedule and budget the Pilot Plant Facility (PPF) construction and installation.
4	Meetings & Presentations	Monthly progress meeting on 3/13/07.
		Presentation on CWP to CELSOC local chapter on 3/13/07.
5	Right-of-Way Acquisition Services	Follow-up call with Universal Field Services on ASR site appraisals.
6	CPUC Coordination and Clarification	Attended DRA Regional Project Exploratory meetings, including potable and non-potable water working groups.
		Further action on investigations of North Marina Alternative put on hold pending clarifications from CPUC on need to perform at this time (as part of EIR) and cost recovery questions.
7	Amended Application Data Requests	Prepared testimony for 2006 pre-construction cost submittal to CPUC ALJ on 3/30/07.
		Assisted in preparing response to CPUC DRA Data Request-19 with updated CWP budget.
8	Watershed Sanitary Survey	Invoice paid to Elaine Archibald for February and March services, including review of existing water quality data and project management.
		Provided support to Archibald on existing water quality data review.
10	Permitting Coordination	Continued coordination of right of entry approval from US Army to install ASR test and monitoring wells on Bayonet Drive.
		Met with City of Seaside regarding ASR test and monitoring well permitting.
		Submitted draft ASR monitoring well permit application to Monterey County Environmental Health, which will be completed by well contractor.
11	Focused Surveys	Follow-up call with Denise Duffy and Associates on spring plant surveys.

12	Unidentified Scope of Services	* ASR monitoring well construction was put out to bid and the low-cost well driller selected.
		* Continued discussions with the City of Seaside and Bayonet Golf Course developer on ASR site selection and coordination with golf-course redevelopment plans.
13	Project Plan Preparation	Continued building the CWP project controls and schedule into Primavera program.
15	Program Management Support	Monthly status report.
		Weekly project management meetings with John Klein.
April 2007		
3	Pilot Plant Program Mgmt	Coordination with MLPP initiated after they submitted amendment request to CEC on 4/19/07. Reinitiated pilot plant construction planning with contractors (Granite and Varney Electric).
		Pilot Plant building permit obtained from Monterey County.
		Paid Kleinfelder for geotechnical memo letter to Monterey County for Building Permit (letter dated 11/06)
4	Meetings & Presentations	Monthly progress meeting.
		Weekly project status meetings/calls with John Klein
		Assisted with meeting presentation for CWP advisory committee.
5	Right-of-Way Acquisition Services	Prepared appraisal/property acquisition information
6	CPUC Coordination and Clarification	Attended DRA meetings on regional alternatives and strategies, including CPUC EIR consultant smaller focus group meetings on other agency water supply projects and alternatives, non-potable water supply projects, and conservation.
		Provided draft Monterey existing system description for background in EIR project description.
		Coordination meeting was held with MCWD and FORA to coordinate General Jim Moore pipeline plans and evaluation of cost sharing of this conveyance segment, and initiated Technical Memorandum on Marina Coast Water District pipeline sharing on General Jim Moore Blvd.

		Reviewed larger water exchange alternatives being evaluated and discussed by EIR consultant and DRA.
		Met with Monterey Co. Water Resources Agency (MCWRA) regarding North Marina Alternative near-shore modeling (as requested in Data Request 2).
8	Watershed Sanitary Survey	Watershed Sanitary Survey work has been put on hold since January pending start-up operations of Pilot Plant.
10	Permitting Coordination	Continued coordination of right of entry approval from US Army to install ASR test and monitoring wells on Bayonet Drive.
		Determined discharge requirements for ASR test and monitoring well program and coordinated with RWQCB.
11	Focused Surveys	Biological plant and aquatic surveys were conducted for various portions of project area, including general review of resources on Monterey Pipeline Alternative alignment.
13	Contingency Plan White Paper	Implementation of project scheduling into Primavera software, and updates on project schedule.
		Coordination of project budget update from Data Request-19 with schedule update in Primavera.
15	Program Management Support	Held two-day meeting with ASR team to review Draft ASR Technical Memorandum 3 and status of ASR work effort to date.
		Submitted formal request to MCWD for water supply for ASR testing at Bayonet Drive.
		Held ASR coordination meeting with MPWMD. Created sub-committee to jointly develop long-term ASR project description, distinguishing future ASR phases from CWP proposal.
		Continued discussions with the City of Seaside and Bayonet Golf Course developer on ASR site selection and coordination with golf-course redevelopment plans.
May 2007		
3	Pilot Plant Program Mgmt	Meetings with MLPP to discuss construction activity protocols, MLPP liaison hire, and construction schedule.
		Pilot plant construction planning with contractors (Granite and Varney Electric).

		Review and input on CCC CDP Revised Findings.
		Response to questions from MLPP and CEC for permit amendment.
		Coordination with Ted Urcino (MLPP liaison)
4	Meetings & Presentations	Monthly progress meeting.
		Weekly project status meetings/calls with John Klein
		Presentation to Monterey Peninsula Water Management District Community Advisory Committee on 5/29/07.
5	Right-of-Way Acquisition Services	Coordination with Clark Realty on Bayonet Dr. parcel for ASR test and monitoring well sites, including identification of addition sites within military housing areas.
6	CPUC Coordination and Clarification	Meeting with CPUC EIR consultant on outstanding data requests and outcome of discussions with MCWRA on near-shore modeling of NMA, ASR update, project description.
8	Watershed Sanitary Survey	Coordination with Army Corp of Engineers on water quality sampling during Moss Landing Harbor dredge and preparation to reinitiate work with Pilot Plant construction progress.
10	Permitting Coordination	Finalization of right of entry approval from US Army to install ASR test and monitoring wells on Bayonet Drive.
		Processed RWQCB discharge to surface area permit for ASR test well testing.
		Coordination with Monterey County Environmental Health on well drilling permit.
11	Focused Surveys	Payment to Denise Duffy & Assoc for spring blooming biological plant and aquatic surveys.
15	Program Management Support	Prepared memo to John Klein regarding DRA data request 19 error and correction, and provided support on subsequent data requests.
		Quarterly budget and cost trends analysis update.
		Review and comment on first draft joint ASR Program Description.
		Meeting with Tim Miller on legal review of ASR permit requirements and letter of intent to Clark Realty.

		Preparation of Tech Memo on General Jim Moore Blvd. pipeline sharing with MCWD.
		Monthly status report.
		Meeting coordination and scheduling.
		Document control and project file upkeep.
		Payment to Ron Shelton for Primavera scheduling support.
June 2007		
3	Pilot Plant Program Mgmt	Construction kick-off meetings with Granite Construction, Darrel Varni Electric and MLPP
		Daily Construction Management
		Construction Survey
		Plan Revisions to Building Permit (cast-in place vault and trench), including plan preparation and submittal to Monterey County
		Monterey County building inspection coordination and building permit amendment
		Coordination meeting with Acciona and American Water Pridesa
4	Meetings & Presentations	Monthly progress meeting.
		Weekly project status meetings/calls with John Klein
5	Right-of-Way Acquisition Services	Coordination with Clark Realty on Bayonet Dr. parcel for ASR test and monitoring well sites, including identification of addition sites within military housing areas.
		Preliminary appraisal work for Bayonet Dr. ASR site
6	CPUC Coordination and Clarification	Coordination with CPUC EIR consultant on project description.
7	Amended Application Data Requests	Coordination and preparation of Data Request responses and Amended Testimony
		Review of CPUC materials, including 2006 pre-construction cost audit report and reasonableness review

8	Watershed Sanitary Survey	Coordination with Army Corp of Engineers on water quality sampling during Moss Landing Harbor dredge and preparation to reinitiate work with Pilot Plant construction progress.
10	Permitting Coordination	Finalization of right of entry approval from US Army to install ASR test and monitoring wells on Bayonet Drive.
		Finalization of RWQCB General Permit for surface discharge for ASR test and monitoring wells
11	Focused Surveys	Coordination with Denise Duffy & Associates (biology sub-consultant)
15	Program Management Support	Alternative ASR well siting analysis (east of General Jim Moore Blvd.) based on comments heard during meetings with Clark Realty
		Review and comment on second draft joint ASR Program Description.
		ASR Coordination meetings, including pre-construction conference and test well bid document review
		Daily Project Management Activities
		Project Schedule Updates
		Monthly status report.
		Meeting coordination and scheduling.
		Document control and project file upkeep.
July 2007		
3	Pilot Plant Program Mgmt	Daily Construction Management, including payment to MLPP liaison and security guard services as requested by MLPP
		Construction Survey
		As needed design/engineering support for contractors & construction management, including electrical subconsultant coordination
		Weekly construction meeting and progress reports
		Monterey County building inspection coordination and building permit amendment
		Attended 2-day Pilot Plant Study Plan workshops with Acciona and American Water Pridesa
		Safety training at MLPP

4	Meetings & Presentations	Conference call with Mark Schubert, Fred Fezollahi, John Klein and Larry Gallery to discuss RBF scope and status
5	Right-of-Way Acquisition Services	Coordination with Clark Realty on Bayonet Dr. parcel for ASR test and monitoring well sites, including identification of addition sites within military housing areas.
		Preliminary appraisal work for Bayonet Dr. ASR site
6	CPUC Coordination and Clarification	Response to CPUC EIR consultant inquiry on PEA and appendices.
7	Amended Application Data Requests	Review of CPUC materials, including 2006 pre-construction cost audit report and reasonableness review
		Coordination on hearing schedule, if hearings determined necessary.
8	Watershed Sanitary Survey	Pre-dredge water quality sampling during Moss Landing Harbor dredge and preparation to reinitiate work with Pilot Plant construction progress.
10	Permitting Coordination	Response to information requests from CEC staff and pre-hearing coordination.
		Attendance at CEC hearing on MLPP amendment for Pilot Plant
15	Program Management Support	Meeting with Diana Ingersoll at City of Seaside regarding ASR siting issues.
		Coordination with ASR consultant team
		Daily Project Management Activities
		Project Schedule Updates
		Monthly status report.
		Meeting coordination and scheduling.
		Document control and project file upkeep.
August 2007		
3	Pilot Plant Program Mgmt	Daily Construction Management, including payment to MLPP liaison and security guard services as requested by MLPP
		As needed design/engineering support for contractors & construction management, including electrical subconsultant coordination
		Weekly construction meeting and progress reports
		Monterey County building inspection coordination
		Coordination and preparation of Pilot Plant Study Plan
4	Meetings & Presentations	Monthly CWP meeting preparation and meeting follow-up

		Monthly CWP meeting
8	Watershed Sanitary Survey	Water quality sampling during Moss Landing Harbor dredge.
10	Permitting Coordination	Attendance at California Energy Commission hearing on MLPP operating amendment for Pilot Plant
11	Focused Surveys	Botanical surveys summary memorandum from Denise Duffy and Associates, as well as survey data
15	Program Management Support	Daily Project Management Activities and on-going client coordination
		Meeting coordination and scheduling.
		Document control and project file upkeep.
		ASR coordination



P.O. No. 4842
 Date: February 6, 2007
 Job No.: 70-100045.003

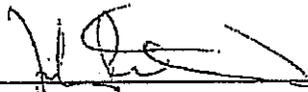
Vendor:

Ship To:

Ronald Shelton	RBF Consulting
REDACTED	14725 Alton Parkway/ P.O. Box 57057
Fountain Valley, Ca., 92708	Irvine, CA 92619-7057

Order Date:	Contact:	Terms:	For:
2/6/07	Ronald Shelton		Paul L. Findley

QUANTITY	PLEASE SUPPLY ITEMS LISTED BELOW	PRICE
	Professional services rendered pursuant to the signed Agreement dated January 25 th 2007 between Consultant and Sub-Consultant.	
	Total Contract Amount	\$14,000.00

IMPORTANT	
P.O. NUMBERS MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.	John Peters Corporate Controller

RBF Consulting is an equal opportunity employer. We hereby incorporate by reference as part of this agreement applicable provisions of Executive Order 11246 covering race, color, religion, sex and national origin; the Vietnam-Era Veterans Readjustment Assistance Act of 1974, as amended, the Rehabilitation Act of 1973, as amended; Executive Order 11625 and 15 U.S.C. Sec. 637 as pertaining to minority business enterprises and small business concerns and Executive Order 12138 pertaining to women's business enterprises; and regulations issued pursuant to each. Pursuant to Executive Order 11248, and particularly 41 C.F.R. Sec. 60-1.2, and by acceptance of this contract, the contractor certifies that he does not and will not maintain any facilities in a segregated manner, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. Further, the contractor agrees that he will obtain a similar certificate prior to the award of any nonexempt subcontractor.

PLANNING ■ DESIGN ■ CONSTRUCTION

14725 Alton Parkway, Irvine, CA 92618-2027 ■ P.O. Box 57057, Irvine, CA 92619-7057 ■ 949.472.3505 ■ Fax 949.472.8373

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Consulting Engineers and Land Surveyors of California

AGREEMENT BETWEEN CONSULTANT AND SUBCONSULTANT

AGREEMENT ENTERED INTO AT San Diego, California, on this date of January 25, 2007 by and between RBF Consulting ("Consultant") and Ronald Shelton ("Subconsultant").

Attention: Ronald Shelton

Project: Project Controls for Coastal Water Project

Description of Subconsultant's Services: Provide assistance in development of a project schedule using Primavera software for the Coastal Water Project in Monterey, California.

Subconsultant Fee: \$14000 which includes professional services at \$110.00 per hour and all expenses at cost incurred in the performance of the work.

Payments: Subconsultant shall submit monthly invoices to consultant. Consultant shall bill client monthly on account of Subconsultant's services and shall pay Subconsultant within fourteen days of the time consultant receives payment from client on account thereof.

Approved and accepted in accordance with the General Terms of Agreement for Subconsulting Services contained in paragraphs one (1) through thirteen (13) herewith.

RBF CONSULTING

By: [Signature] (Signature)

Paul L. Findley (Type/Print Name)

Vice President (Title)

Date: 1/25/07

RBF Job No: 70-1000/45.003

Ronald Shelton REDACTED REDACTED Fountain Valley, CA 92708 REDACTED

[Signature] SUBCONSULTANT (Signature)

Ronald Shelton (Type/Print Name)

CONSULTANT (Title)

Date: 1/25/2007

P.O. No: 4842



GENERAL TERMS OF AGREEMENT FOR SUBCONSULTING SERVICES

Consultant and Subconsultant agree that the following provisions shall be part of this agreement:

1. This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of Consultant and Subconsultant.
2. This agreement shall not be assigned by either Consultant or Subconsultant without the prior written consent of the other.
3. This agreement contains the entire agreement between Consultant and Subconsultant relating to the project and the provision of services to the project. Any prior agreements, promises, negotiations or representations not expressly set forth in this agreement are of no force or effect. Subsequent modifications to this agreement shall be in writing and signed by both Consultant and Subconsultant.
4. This agreement shall be governed by and construed in accordance with the laws of the State of California.
5. Consultant and Subconsultant agree to cooperate with each other in order to fulfill their responsibilities and obligations under this agreement. Both Consultant and Subconsultant shall endeavor to maintain good working relationships among members of the project team.
6. Subconsultant shall perform services as an independent contractor and shall perform the services provided for in this agreement in accordance with generally accepted standards of professional practice in effect at the time of performance.
7. Unless provided otherwise by the terms of Subconsultant's Services, Subconsultant shall submit monthly invoices to Consultant. Subconsultant recognizes that his or her invoices will be presented by Consultant to the project client and that Consultant will pay Subconsultant the amount due for services rendered and expenses incurred within fourteen (14) calendar days after Consultant is paid by the project client, however, in no event shall payment be later than sixty (60) days from date Consultant receives Subconsultant's invoice. Nothing contained in this paragraph shall constitute a waiver or release of Subconsultant's mechanic lien rights.
8. Before any services are provided under this agreement, Subconsultant shall procure and maintain in effect insurance coverage in amounts not less than set forth below.
 - (a) Workers' Compensation and Employer's Liability: as required by the laws of the State of California.
 - (b) General Liability: commercial general liability insurance for personal and bodily injury, including death and property damage, on an occurrence basis, in the amount of \$2,000,000 combined single limit each occurrence and in aggregate.
 - (c) Automobile Liability: automobile liability for personal and bodily injury, including death and property damage, in the amount of \$1,000,000 for each accident.
 - (d) Professional Liability: professional liability insurance for damages incurred by reason of any negligent act, error or omission by Subconsultant in the amount of \$1,000,000 combined single limit each occurrence and annual aggregate.
 - (e) Certificates: Subconsultant shall provide certificates of insurance evidencing coverage required above. Each certificate shall provide that the coverage afforded shall not be canceled or ordered reduced by the Subconsultant, except with at least thirty (30) days prior written notice to the Consultant. Should this occur, Subconsultant shall procure and furnish to Consultant prior to such effective date new certificates conforming to the above coverage requirements. Subconsultant shall not have the right to receive any payment under this agreement until all insurance certificates are received by Consultant.
9. Subconsultant agrees to indemnify and hold harmless Consultant, its officers, directors and employees from and against all claims, losses, demands, damages or costs, including attorneys' fees, arising from the negligent acts, errors or omissions of Subconsultant, its officers, directors and employees, or anyone for whom Subconsultant is legally liable, arising out of the performance of this agreement.
10. Consultant may terminate Subconsultant's performance under this agreement, with or without cause, upon written notice. Consultant shall compensate Subconsultant for performance of services through the period prior to termination, plus reasonable termination expenses, provided Subconsultant is not in default.
11. In the event of any litigation arising from or related to the services provided under this agreement, the prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, experts' fees and other related expenses.
12. If any provision of this agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall remain in full force and effect and are binding on Consultant and Subconsultant.
13. In an effort to resolve any conflicts between Consultant and Subconsultant arising out of or relating to the performance of this agreement, Consultant and Subconsultant agree that all disputes between them arising out of or relating to this agreement shall be submitted to nonbinding mediation unless the parties mutually agree otherwise. This dispute resolution provision shall not preclude either party from filing a legal action in small claims court if the amount in dispute is within the jurisdiction of the small claims court, nor does it preclude or limit the right to perfect or enforce applicable mechanic's lien or stop notice remedies.

General Terms

Subconsultant Initials _____

Consultant Initials: _____



P.O. No. 5017
 Date: June 21, 2007
 Job No.: VARIOUS

Vendor:		Ship To:	
Theodore J. Ursino		RBF Consulting	
REDACTED		14725 Alton Parkway/ P.O. Box 57057	
Salinas, CA 93908		Irvine, CA 92619-7057	
Order Date: Contact:		Terms: For:	
5/29/07	Theodore J. Ursino		James McDonald

QUANTITY	PLEASE SUPPLY ITEMS LISTED BELOW	PRICE
	Professional services rendered pursuant to the signed Agreement dated, May 29, 2007 between Consultant and Sub-Consultant.	
	Original Contract Amount	\$35.00 Per Hr

IMPORTANT	
P.O. NUMBERS MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.	David Byrnes Assistant Corporate Controller

RBF Consulting is an equal opportunity employer. We hereby incorporate by reference as part of this agreement applicable provisions of Executive Order 11246 covering race, color, religion, sex and national origin; the Vietnam-Era Veterans Readjustment Assistance Act of 1974, as amended, the Rehabilitation Act of 1973, as amended; Executive Order 11625 and 15 U.S.C. Sec. 637 as pertaining to minority business enterprises and small business concerns and Executive Order 12138 pertaining to women's business enterprises; and regulations issued pursuant to each. Pursuant to Executive Order 11246, and particularly 41 C.F.R. Sec. 60-1.2, and by acceptance of this contract, the contractor certifies that he does not and will not maintain any facilities in a segregated manner, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. Further, the contractor agrees that he will obtain a similar certificate prior to the award of any nonexempt subcontractor.

Consultant Services Agreement

RECEIVED

JUN 07 2007

A/P IRVINE

This Agreement is made on this 29th day of May and between RBF Consulting, a California corporation hereinafter referred to as "RBF" and Theodore J. Ursino, hereinafter referred to as "Consultant."

WHEREAS, RBF desires that Consultant provide services to RBF on a non-employee, independent contractor basis during the construction of the Coastal Water Project Pilot Plant at Moss Landing Power Plant;

WHEREAS, Consultant is willing to provide such services on the terms and conditions contained herein;

NOW THEREFORE, the parties mutually agree as follows:

- 1) Term of Agreement. The term of this Agreement shall commence on June 4, 2007 and continue until October 5, 2007 unless terminated by either party as provided herein.
- 2) Consulting Services. During the term of this Agreement, Consultant shall provide consulting services to RBF with respect to the following:
 - a) Engineering services on an average of 30 hours per week, or as necessary, within the general scope of Consultant's capabilities, as requested by RBF
 - b) Provide such other consulting services as RBF shall request so long as such services are within the general scope of Consultant's capabilities
- 3) Payments to Consultant. RBF shall pay Consultant on an hourly basis for all authorized services and tasks provided. Billing will be at the rate of \$35 per hour for consulting services provided hereunder. Consultant shall submit an invoice to RBF on a biweekly basis for hours worked for each two-week period. RBF will pay invoices in full within fifteen (15) days of receipt of invoice from Consultant.
- 4) Confidential Information. For the period of five years, Consultant shall not disclose, either orally or in writing, any confidential proprietary information relating to either RBF or the clients of RBF, which information is obtained by Consultant as a result of this engagement to perform the Services, except for disclosures required by court order or lawfully issued subpoena.
- 5) Independent Contractor Status. It is the parties' intention that Consultant shall act an Independent Contractor under this Agreement. Except as otherwise agreed herein, Consultant shall provide his own tools and instrumentalities necessary to provide the consulting services to be rendered hereunder.

6) Termination. This Agreement is subject to termination by RBF or by Consultant at any time. RBF shall compensate Consultant for all Services performed hereunder through the date of any termination and all-reasonable costs and expenses incurred by Consultant in effecting the termination.

7) General Conditions

- a) RBF shall indemnify, defend, and hold Consultant harmless from and against any and all claims, expenses, losses, liabilities, or damages arising from, or in any way connected with, the performance of services under the terms of this Agreement.
- b) Neither RBF nor Consultant may assign its rights under this Agreement or delegate its obligations hereunder, nor shall any such rights or obligations be transferred or delegated by operation of law without the prior written consent of both parties.
- c) This Agreement shall be governed by the laws of the State of California.
- d) Any controversy or claim between the parties arising out of or relating to this Agreement or the breach thereof shall be settled by mediation. The prevailing party in such action shall be entitled to an award of its reasonable attorneys' fees and costs incurred. If the controversy or claim cannot be resolved through mediation and unless otherwise mutually agreed, the dispute shall be settled by litigation in an appropriate court in the state of California.
- e) This Agreement may be altered, amended, modified, or revoked only by an instrument in writing signed by the parties hereto.
- f) This Agreement constitutes the entire agreement of the parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings of the parties in connection herewith.
- g) Consultant will strive to perform Services in a manner consistent with that level of care and skill ordinarily exercised by other members of Consultant's profession currently practicing in the same locality under similar conditions. RBF's sole and exclusive remedy for any alleged breach of Consultant's standard of care hereunder shall be to require Consultant to re-perform any defective Services.

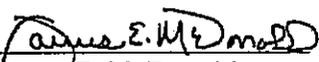
NO OTHER REPRESENTATION, GUARANTEE, OR WARRANTY, EXPRESS OR IMPLIED, IS INCLUDED OR INTENDED IN THIS AGREEMENT, OR IN ANY COMMUNICATION (ORAL OR WRITTEN), REPORT, OPINION, DOCUMENT, OR INSTRUMENT OF SERVICE.

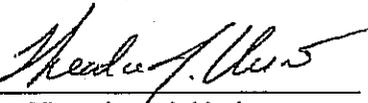
h) Should performance of Services by Consultant be affected by causes beyond its reasonable control, Force Majeure results. Force Majeure includes, but is not restricted to: acts of God; acts of a legislative, administrative or judicial entity; acts of contractors other than contractors engaged directly by Consultant; fires; floods; labor disturbances; and unusually severe weather. Consultant will be granted a time extension and the parties will negotiate an equitable adjustment to the price of any affected Work Order, where appropriate, based upon the effect of the Force Majeure on performance by Consultant.

IN WITNESS WHEREOF, the parties hereto have subscribed their names, the date and year first above written in this Agreement.

RBF Consulting
14725 Alton Parkway
Irvine, CA 92618
Federal Tax ID: 95-2247293

Theodore J. Ursino
REDACTED
Salinas, CA 93908

By: 
James E. McDonald
President

By: 
Theodore J. Ursino
Consultant

SS#: REDACTED

Date: 6-19-07

Date: 6/4/07

PO. # 5017

ATTACHMENT 3

Services Provided by ASR Systems

Task	Task Description	Work Performed
December 2006		
1	Kickoff Meeting/ Test Well Siting/ Existing Data Review	Project Management and Meetings Completed Task 1 Technical Memorandum Prepared of Cost Estimate comparison for : permanent vs temporary test well installation Prepared Draft Letter of Intent for Clark Realty
2	Install Monitoring and Test Wells	Initiated preliminary design technical memorandum
6	CVSIM Modeling	Provided input to Monterey Peninsula Water Management District on CVSIM Modeling
January 2007		
2	Install Monitoring and Test Wells	Project Management Completed TM-2 – ASR Test Well Alternatives Provided presentation of ASR to City of Seaside Participation in meetings with CAW, RBF. Seaside and MPWMD ASR Test Well and Wellhead Design
6	CVSIM Modeling	Continued input to MPWMD on CVSIM modeling
February 2007		
2	Install Monitoring and Test Wells	Project Management Monitor Well, ASR Test Well and Wellhead design activities Revised TM-1 and TM-2 based on comments received from CAW and RBF.
6	CVSIM Modeling	Continued input to MPWMD on CVSIM modeling

March 2007		
2	Install Monitoring and Test Wells	<p>Project Management</p> <p>Preparation of specifications for Monitoring Well 1</p> <p>Provided assistance with contractor bidding of Monitoring Well 1</p> <p>Continued progress on ASR Test Well specifications and wellhead design</p> <p>Preparation of TM 3</p>
April 2007		
2	Install Monitoring and Test Wells	<p>Prepared and submitted draft TM 3</p> <p>Prepared TM 4</p> <p>Meetings with Watermaster Board, MPWMD and CAW</p> <p>Coordination with RBF</p>
May 2007		
2	Install Monitoring and Test Wells	<p>Project Management</p> <p>Prepared ASR-3 Test Well specifications</p> <p>Preparation of TM 4, ASR Program Description</p>
June 2007		
2	Install Monitoring and Test Wells	<p>Project Management</p> <p>Submitted ASR 3 bid documents for CAW review</p> <p>Continued preparation of TM 4, ASR Program Description</p> <p>Participated in preconstruction meeting and technical review meeting in Monterey for monitoring well MW-1</p>

July 2007		
2	Install Monitoring and Test Wells	Project Management Preparation of final draft of ASR program description Preparation of final bid documents for ASR Well 3 Coordination with MCWD for test injection water
August 2007		
2	Install Monitoring and Test Wells	Project Management Preliminary design of MCWD interconnection ASR monitoring well coordination ASR Program description followup

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