

Agreement for Professional Services

Pyramid Peak Water Treatment Plant Improvements

City Project No.131402

This Amendment No. 1 to the Agreement for Professional Services for Services Pyramid Peak WTP Improvements Project 131402 ("Amendment No. 1) is made this ____ day of _____, 20__, by and between the City of Glendale, an Arizona municipal corporation ("City") and Black & Veatch Corporation, a Delaware corporation authorized to do business in Arizona ("Consultant").

RECITALS

- A. Consultant is currently under contract with the City on the above-referenced project;
- B. Since the inception of the work, the scope and requirements have changed substantially and cannot be expanded or corrected through change orders or change directives;
- C. The changes in the Scope of Work will benefit the City; and
- D. Expanding the Scope of Work (attached Amended Exhibit B) under the original Agreement will allow the work to be completed under the appropriate professional standards and represents a cost savings to the City.

AGREEMENT

The original Agreement for Professional Services for Project No. "131402" is amended as follows:

Section 4. Additional compensation for the change in the Scope of Work will not exceed \$697,416 as specifically detailed in the attached Amended Exhibit D (time and materials).

Section 15. The following Amended Exhibits are incorporated by reference as though fully set forth in this Amendment:

Amended Exhibit B
Amended Exhibit D

Scope of Work
Compensation

All other terms and conditions not amended by this writing remain unchanged and enforceable as found in the original Agreement C-8912 currently on file in the Office of the City Clerk, City of Glendale.

"City":

CITY OF GLENDALE, an Arizona
municipal corporation

Brenda S. Fischer, City Manager

ATTEST:

Pamela Hanna, City Clerk (SEAL)

APPROVED AS TO FORM:

Michael D. Bailey, City Attorney

"Consultant"

BLACK & VEATCH CORPORATION
A Delaware corporation licensed to do
business in Arizona


By: Dan W. Meyer
It's: Vice President

PROFESSIONAL SERVICES AGREEMENT – AMENDED EXHIBIT B
SCOPE OF WORK

**AMENDED EXHIBIT B
SCOPE OF WORK
PYRAMID PEAK WATER TREATMENT PLANT IMPROVEMENTS
PHASE II**

The Phase II scope of work includes an evaluation of specific Pyramid Peak Water Treatment Plant (PPWTP) components not included in Phase I evaluations, condition assessments of a portion of the 60-inch finished water effluent transmission pipeline, and helping the City obtain an Aquifer Protection permit for the sludge lagoons.

Task Group 100 – Project Management

Task 110: General Management and Administration

This is a continuation of the General Management and Administration scope of work in as described in Phase I Scope of Services. The project schedule will be updated for Phase II Work.

Task 120: Conduct Monthly Progress Meetings

The Consultant will prepare meeting documentation and conduct meetings to discuss the progress, direction and present technical aspects of the project. Project documentation will consist of preparing and distributing meeting agendas and minutes. Meeting minutes will summarize key discussions, comments, decisions, and any action items required. A total of 10 progress project meetings are anticipated. Consultant will provide draft meeting minutes to the City for review and final minutes incorporating comments from the City on the draft minutes, as required.

Group 100 Deliverables:

- Project Schedule
- Meeting Agenda and Minutes, with Action Items
- Monthly Progress Reports and Schedule Updates
- Document and Data Request Log
- Action Items and Decision Log
- Quarterly cash flow projections

Task Group 200 –Assessment of Existing Facilities

The following equipment and systems will be evaluated:

- A. Filter backwash water supply – Assess pump condition, remaining life and options for replacement with a configuration that is easier to access for maintenance
- B. Service water supply system – Assess service water supply requirements, current supply system capacity, pressure, redundancy and flow range, remaining life and options for replacement with a configuration that is easier to access for maintenance
- C. Coagulant aid polymer system – Assess feasibility of modifying the system to include both dilution and aging tanks

- D. Potassium Permanganate system – Discuss and document system capacity limitations with WTP operations, assess existing system and recommend improvements to provide sufficient potassium permanganate chemical feed to meet treatment plant quagga control needs
- E. Chlorine gas piping system – Assess potential solutions to minimize or eliminate short length of chlorine gas pressure pipeline between the container and the eductor
- F. Chlorine storage area ventilation – Assess storage area and potential interferences between the chlorine storage area ventilation and the compliance laboratory ventilation
- G. Filter 1 underdrain – Assess potential underdrain issues that result in lower filter run times
- H. Filter Backwash Flow Control Valve – Assess operation of filter backwash flow control valve and develop solutions to address valve “flutter” at the start of backwash
- I. Standby engine generator – Assess standby engine generator remaining life and capacity to maintain power supply for the WTP.
- J. Train 1 sedimentation basin sludge drain – Evaluate feasibility of relocating the drain pipe inlet to a lower location to expedite sludge evacuation from the basin and the cleaning process
- K. Sludge lagoon drain valves – Estimate replacement in-kind costs for the existing leaking sludge lagoon drain valves
- L. Train 1 sedimentation basin sludge collection – Estimate replacement in-kind costs to replace sludge scrapers and chains, and cell blowdown isolation valves.
- M. Sedimentation basin lighting – Estimate costs to improve illumination such as replace with LED type lighting
- N. Filter Valve Actuators - Estimate costs for replacing aging filter valve actuators

In addition, the Consultant will evaluate the existing Operator’s laboratory and develop a preliminary concept plan for the fume hood location.

Task 201: Review Available Documentation

The Consultant will review the following information as it relates to the components described in items A through N in Task Group 200:

- As-Built drawings for all construction phases
- Available photos from past construction phases
- Equipment Submittals and O&M manuals
- WTP operational records including:
 - Digital (Excel or other database), filter run times, filter turbidity, filter performance data, chemical feed rates, WTP flows
 - Plant equipment (Items A, B,D, G, H, I) maintenance records and reports

Task 202: Site Investigations

Up to three site investigation visits will be completed to review those systems identified in Task Group 200 and compare actual installed conditions with as-built documents. Visual observations of the equipment and systems included in Task Group 200 description will be documented using digital photography, where feasible, while maintaining WTP operations. This task is for the purpose of

completing the system evaluations and does not include making modifications to the City's as-builts. Plant equipment items A, B, C, D and I and their operating ranges identified through O&M and on-site observations will be documented.

The filter underdrain testing conducted in 2007 by the Consultant resulted in the recommendation that Filter 1 underdrain be inspected. The Filter 1 underdrain evaluation will require the City remove the media in Filter 1 to expose the underdrains. In addition the gullet below Filter 1 underdrain will be investigated either by scoping camera or by physically entering the area. If scoping camera is required it is assumed the project will utilize the City's equipment or contractor supplied equipment by others.

The chlorine storage area ventilation evaluation will be limited to on-site observation of routing where it is visible and a review of the as-built drawings for HVAC duct routing, venting and intake. Smoke or other testing can be added as a supplemental service

Task 203: Equipment Systems and Needs Assessment

For Items A, B, C, D, G, H, and I described in task 200 above, Consultant will complete equipment assessments including the following:

- Installation Date
- Last Rehabilitation Date
- Condition (visual assessment if possible on 1 to 5 scale)

Assessment summaries will also take into consideration process evaluations completed during Phase I, such as chemical feed system capacity requirements for challenging water quality conditions.

The preliminary results from the needs assessment will be presented at a workshop and comments from the City regarding the findings will be documented. The purpose of this meeting will be to obtain agreement from the City relative to what should be evaluated further in Task 204. One additional workshop is included as not all needs assessments may be fully addressed at the time Workshop 1 is scheduled. These include assessments relative to the Filter 1 underdrain and Train 1 sedimentation basin equipment as they may be dependent on timing of those processes being taken off line for a limited period.

Within a week of each workshop, the Consultant will provide meeting minutes with a listing of the equipment that requires improvements or replacement which will be carried forward to Task 204 evaluations.

Task 204 – Develop and Evaluate Alternatives and Recommend Improvements

Based on the results from Task 202 and 203, the Consultant will develop and evaluate up to two alternatives each for recommended improvement to address needs identified for the service water supply system, backwash water pumps, chlorine gas supply piping, chlorine storage area ventilation, Fume hood location, Filter 1 underdrain, standby engine generator and chemical feed systems C and D identified in Task Group 200. Chemical feed system equipment evaluations will also utilize results from

Phase I. Descriptions, explanatory sketches or schematics of recommended equipment system improvements will be prepared.

Equipment system improvements alternatives will be presented at project progress meetings so comments from the City can be gathered and addressed prior to subsequent work.

Task 205 - Improvements Cost Estimates

Based on the selected alternatives from Task 204 budgetary cost estimates to AACEI Class 5 (Low: -20% to -50% and High: +30% to +100%) will be prepared for Task 200 items A through N as well as the coagulant feed systems, hydrofluorosilicic acid system, analytical equipment and sludge handling system from Phase I work.

Task 206 -- TM 4 - Existing Equipment Systems Needs Assessment and Improvements Recommendations

A draft Technical Memorandum 4 describing the equipment systems needs assessment, recommended improvements and budgetary costs will be prepared (TM1-TM3 were provided in Phase I). Ten copies of the Draft Technical Memorandum 4 will be provided to the City for review. The Consultant will incorporate City comments as needed and subsequently issue the final Technical Memorandum 4 electronically along with ten hard copies.

Task 207 --Reservoir THM Mitigation Evaluation

The reservoir level seasonal set-points were evaluated and recommended as part of the Water Distribution Optimization Study. Consultant will use this information and evaluate other alternatives for reducing THM generation in the reservoirs. The following alternatives will be evaluated:

1. Reducing the reservoir influent chlorination setpoint. Consultant will assess the reservoir T_{10} detention time using the USEPA. Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources. Washington, D.C.: USEPA Office of Drinking Water, 1991 and determine chlorine residual requirements for disinfection credit. Consultant will use the USEPA Water Treatment Plant Model to estimate DBP reduction resulting from lower reservoir influent chlorine residual.
2. Consultant will estimate requirements for a reservoir aeration system for the PPWTP reservoirs. Consultant will estimate reduction in volatile TTMS based on the aeration system concept design parameters. Conceptual costs will be evaluated and provided.

The preliminary results from reservoir THM mitigation evaluation will be presented at a workshop and comments from the City regarding the findings will be documented. A draft Technical Memorandum 5 describing the reservoir THM mitigation evaluation, recommended improvements and budgetary costs will be prepared. Ten copies of the Draft Technical Memorandum 5 will be provided to the City for review. The Consultant will incorporate City comments as needed and subsequently issue the final Technical Memorandum 5 electronically along with ten hard copies.

Task Group 200 Deliverables:

- Ten hard copies of the Draft and Final Technical Memorandum 4 Existing Equipment Systems Needs Assessment and Improvements Recommendations and one pdf copy.
- Ten hard copies of the Draft and Final Technical Memorandum 5 Reservoir THM Mitigation Evaluation and one pdf copy.

Task 300 Process Evaluations (Completed in Phase I)

Task 400 – Preliminary Design Report

401 Preliminary Design Report

The Consultant will prepare a Preliminary Design Report, which incorporates the findings, conclusions, and recommendations of the Phase I and Phase II – Facility Assessments (Task 200). The Preliminary Design Report will include planning recommendations, preliminary design criteria and budgetary cost estimates to AACEI Class 5. Ten copies of the draft Preliminary Design Report will be provided to the City for review. The City will provide comments on the Draft Report. The Consultant will incorporate comments and subsequently issue the Final Preliminary Design Report electronically along with ten hard copies within 10 business days after receiving all of the City's comments.

Task Group 400 Deliverables:

Preliminary Design Report

Task Group 500 – Pyramid Peak WTP Aquifer Protection Permit

This task includes coordination and meetings with the Arizona Department of Environmental Quality (ADEQ) and preparing the Aquifer Protection Permit (APP) documentation for submission by City of Glendale to the ADEQ for the existing WTP Sludge Lagoons.

Task 501 – Collect and Organize Data and Prepare APP Application Package

The Consultant will organize and attend a pre-application meeting with ADEQ and the City (Task 504). Based on this meeting the Consultant, together with the City, will collect and organize documents, as needed, for submission of the APP permit application. For this effort we have assumed the following data will be requested by ADEQ for the Sludge Lagoon APP:

- Sludge Characterization*
- Previous Basis of Design Reports
- Design Documents (Drawings and Specs)
- Previous Geotechnical Evaluations*
- Lagoon related structural calculations
- Plant location and site plan
- Latest Copies of Self-Monitoring Report Forms (SMRF)*
- Statement of Financial Capability*
- Operator Licenses*
- Plant O&M Manual*

- Emergency Action Plan and Emergency Contact List*
- ADWR Well Maps
- Plant Hydrogeologic Study
- Resume information for design Consultant on each lagoon project
- Engineer's Certificate of Completion for each project**
- Closure procedures and cost estimates
- Post-closure Procedures and Monitoring Cost Estimate

* To be provided by the City

** Reports and Drawings by others to be provided by the City

Information that is not readily available from City sources will require solicitation of other entities including Arizona State Agencies, Federal Agencies and other Engineering Firms. The level of effort for this task is based on all documentation that is issued by outside agencies and others being solicited and available.

The hydrogeologic study will use analytical modeling to develop Discharge Impact Area Analysis and to satisfy ADEQ requirements. A hydrogeologic characterization of the site will include preparing geologic cross-sections displaying the regional and local geologic conditions, description of surficial geology, vadose zone characteristics, aquifer characteristics, surface water conditions, water quality, an inventory of wells within ¼ mile radius, groundwater elevation map and historic water level changes.

This task assumes that the emergency action plan is adequate for the permit application and does not require any action or modifications.

Consultant will prepare the application package in accordance with ADEQ requirements and based on information obtained in the pre-application meeting and document investigation. The level of effort for this task is based on a single application of Documents submitted directly to the City of Glendale for review and submission to ADEQ.

Task 502 – Design Basis Review

Consultant will provide documentation describing the design criteria used for the sludge lagoons including geotechnical evaluations for slide slopes, design reports, geomembrane materials, design drawings and other documentation as required by ADEQ. Consultant will determine if the existing design criteria meets the requirements set forth by ADEQ.

Task 503 – Site Inspections

Consultant will conduct a site visit with the City of Glendale to walk the existing sludge lagoons to document their current condition. After the walkthrough with the City is complete, Consultant will organize a second walkthrough to include the City of Glendale and staff from

ADEQ. A total of two site trips are anticipated for this task and include a coordination meeting with ADEQ following inspection activities.

Task 504 – Coordination Meetings with ADEQ

Pre-Application Meeting – Consultant and the hydrogeological subconsultant will organize and attend a pre-application meeting with ADEQ to establish requirements for the application submittal. An agenda will be prepared along with a preliminary list of data that is assumed to be part of the application package. During the meeting the list will be reviewed and any other information that is needed will be identified. Consultant will prepare meeting minutes and distribute to document meeting outcomes and decisions.

Comment Review Meetings – Consultant will organize and attend 2 comment review meetings to discuss any comments generated after the application package is submitted. Prior to meetings an agenda and comment summary document will be prepared for review with ADEQ personnel. Meeting minutes documenting any decisions or resolutions reached during the meetings will be prepared and distributed. The level of effort for this task is based on 1 meeting for administrative review comments, and 1 meeting for technical comments.

Group 500 Deliverables:

Coordination Meeting Agendas and Minutes (3)

Application Package Submittal

Administrative Responses (2 response documents)

Technical Responses to ADEQ Comments (2 response documents)

Items Excluded from this scope include:

Payment of permit fees

Additional meetings beyond those defined by this task group

Task Group 600 – 60-inch Pipeline Step 1 Assessment Plan

About 6,400 feet of 60-inch PCCP finished water pipeline from the PPWTP Reservoir to Jomax Road will be assessed in a step-wise approach. The work completed in subsequent steps is dependent on previous assessment findings. The City is currently assessing and implementing improvements to the Hillcrest Ranch Booster Station (HRBS) and Zones 2 and 3 piping tie-ins that may allow this portion of the 60-inch pipeline to be taken out of service and drained for a limited brief time for the assessments providing Peoria agrees to and has another source of supply for its CAP service area normally supplied through the Peoria connection. The scope includes planning services to determine the best value assessment option. Allowance item (A105) for the internal inspection is based on the assumption that the internal assessment uses a remote field eddy current transformer coupling "pipe-diver" technology. The first step includes the following assessments:

Task 601 - Collect and Review Existing Drawings and Data

Consultant will obtain and review pipeline manufacturer's shop drawings, and as-built drawings and other information such as corrosion survey records, leak history reports, isolation valve exercise history, air release valve maintenance, and any other available applicable inspection reports.

Task 602 - Field Observations and Pre-Inspection Planning

For prestressed concrete cylinder pipe like the 60-inch line, remote field eddy current transformer coupling (RFTC) technology is available on three platforms. The manned entry with RFTC equipment provides the most information for the lengths of pipeline evaluated. The robotic platform includes high definition video with the RFTC equipment. The third option is the "pipe-diver" RFTC equipment that is inserted with the pipeline still in service. The pipe-diver provides the least amount of information. Mobilization costs for the manned entry and robotic RFTC equipment are more cost effective than the "pipe-diver" RFTC equipment. Pipeline plan and profile drawings received from Glendale to date indicates RFTC robotic technology and manned entry in a drained pipeline are feasible providing the 54-inch isolation valve at Jomax and 67th Avenue is operational, the HRBS pump station is operational and the Zone 2/3 tie-in improvements are completed. The Consultant and its pipeline RFTC specialty subconsultant will conduct field verification of drawings and other information to identify location of valves, air release valves, tees and other features, as well as identify access and constraints, relevant below-ground or above-ground features such as power lines, driveways, private property access limitations and adjacent walls or other structures. Working with the City, the Consultant and its subconsultant will inspect insertion and retrieval locations. If the "pipe-diver" is used as a minimum a 12-inch tap at the beginning and end of the 60 inch line will be required. An allowance is provided for Consultant to provide the documents to allow the City to bid the tapping services. The tap will be by others and is not included in the scope.

The Consultant will develop an internal inspection permitting coordination matrix and review the matrix with the City.

Task 603 - Coordination with City of Peoria

The most cost effective pipeline assessment approach would include closing Peoria tie-in connection and the 54-inch valve on the pipeline at the intersection of Jomax and 67th Avenue and having a drained pipeline between the PPWTP and the closed valve for up to two days. The most expensive option, "pipe diver" would also require closure of the Peoria connection for a short period of time. The Consultant and City will meet with the City of Peoria to discuss timing and impacts to Peoria. Evaluation of alternative supplies to the City of Peoria distribution system including utilization of Peoria's Water Model can be added to this scope, but are not included at this time.

Task 604 - Develop Step 1 Inspection Plan

The Consultant will provide the City with an Inspection Plan detailing how Step 1 pipeline assessment work will be executed. This Plan will include the refined Step 1 pipeline assessment schedule. The Step 1 Plan will take into account field conditions, permitting requirements, mobilization requirements, traffic planning requirements, coordination with Phoenix since the streets are within their jurisdiction and

discussions with the City Operations. Consultant will meet with the Cities of Glendale and Peoria twice to review the plan and gather comments. The Step 1 pipeline assessment plan will be updated accordingly based on comments received.

Task Group 600 Deliverables:

- Draft Step 1 Pipeline Inspection Plan
- Updated Draft Step 1 Pipeline Inspection Plan
- Final Step 1 Pipeline Inspection Plan

Task Group 700 – 10 mgd WTP Expansion Planning (This was completed in Phase I)

Schedule

The schedule for the work is 360 calendar days from notice to proceed.

Allowances

A101 - Indirect Corrosion Assessment

Indirect corrosion assessments along the pipeline alignment will include identification of potential sources of corrosion, including soil corrosivity and electrical stray current such as from gas line impressed current systems and from overhead power lines. The corrosion assessment will be performed in compliance with NACE International Standard Recommended Practice SP0502-2008 – Pipeline External Corrosion Direct Assessment Methodology. The assessments will include the following:

- In-situ soil resistivity testing performed using the Wenner 4-pin Method in accordance with ASTM G57-06 -- Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method in those accessible areas along the pipeline alignment that are areas not overlaid by concrete or asphalt.
- Two-reference-electrode surface survey consisting of measuring the potential difference between two matched copper/copper sulfate electrodes (CSE) in contact with the earth along the pipeline alignment, not under pavement, in ROW accessible to the Consultant, to detect locations for suspected active pipeline corrosion.
- Inspection of pipeline route for potential sources of stray current interference.

We estimate about 30% (about 2000 ft) of the 60-inch pipeline will be accessible for the in-situ soil resistivity and electrode surveys.

A102 – Traffic Control Planning and Traffic Control

The Consultant will coordinate with Phoenix and prepare traffic control plan for accessing the 60-inch pipeline manways through the existing access manholes at Stations 130+70 and 193+54. Consultant will arrange for and provide up to 5 consecutive days of traffic control for the pipeline assessment

A103 - Public Outreach

Consultant with its public outreach subconsultant will provide the following services prior to and in conjunction with the pipeline assessment:

- Identify potential community impacts and issues based on coordination with the City, Contractor, and assessment subconsultants, and provide needed information to community members as required via flyers and web access updates.
- Develop content of flyers for distribution to residents in the specific impacted areas, including contact information and project information, so that residents can better understand the project impacts. Produce and distribute the flyers for neighborhood outreach.
- Work with City of Glendale Webmaster to develop a webpage for the project. It is assumed Consultant will provide the content for Glendale Webmaster input into the web page.
- Collect contact information including residential management, for e-updates when the specific project duration warrants ongoing information.
- Provide information to City of Phoenix, Transportation (Traffic Control), and Engineering.
- Establish a project hotline for the project with a live response 24 hours a day.
- Review placement of traffic control signs that display project hotline number.

A104 – 60-inch Pipeline Tap Bidding Documents

The Consultant will prepare bidding documents including general drawings with piping, tapping sleeve, valve, embedment and backfill notes for completion of two pipeline taps by a Contractor under an agreement with the City. The bidding document will also include technical specifications, and requirements for permitting and traffic control to be completed by the Contractor. Consultant will coordinate with the City's Project Manager for City's procurement and legal review.

Consultant will answer Contractor questions during the bidding period and will evaluate bids received from three Contractors and recommend a Contractor for the work. Consultant will review shop drawings from the Contractor and provide the general coordination between the pipeline tapping Contractor, the City and the Consultants RFTC equipment supplier.

A105 - Internal Survey

Following approval of the Step 1 Inspection Plan, the Consultant and its subconsultant will proceed with the Step 1 Internal Inspection using remote field eddy current transformer coupling (RFTC) technology. The Consultant will remain on-site during all pipeline inspection services in order to direct inspection activities by subconsultant, coordinate with City staff and respond immediately to any issues or preliminary findings that may require adjustment to the Inspection Plan. Informal results of the Step 1 internal inspections will be available within one week of the field work.

If the pipeline can be drained then the inspection will be performed with manned entry using RFTC technology combined with manual soundings and visual inspections. It is assumed it would require two consecutive days of drained pipeline for this inspection.

A draft pipeline assessment summary will be available within twenty one calendar days of the completion of the Steps 1 field work. It is assumed the internal survey could be performed as late as end of October 2015. A106 - Identify Need for Additional Assessments and Pipe Segments Requiring Repair

Based on the results from Step 1, the Consultant will determine if additional assessments are required and, if yes, what the assessments should be and at which pipeline segments and appurtenances the assessments should be conducted. Additional assessments are included as an Allowance to the Step1 level of effort.

A107 Impact Echo Testing

At locations of interest identified by the Internal Inspections, and field corrosion evaluation efforts, the pipeline will be excavated in up to 10 locations by the City's Contractor. The Consultant will then use Impact Echo tests to determine delamination of the outer or inner cement mortar from the steel cylinder. The test points will be on a 1 ft lengthwise grid along a 3-5 ft long pipe length of pipeline exterior exposed by Contractor's excavations. The test will be conducted at 4 to 8 points around the pipe radius.

A108 - Direct Soil Corrosion Assessment

Soil samples will be collected from locations excavated by the Contractor and will be analyzed in a laboratory for pH, sulfide reaction, oxidation/reduction, and chlorides. The electrical resistivity of the samples shall also be measured in the lab and correlated with the results of the field resistivity survey. It is assumed that soil corrosion assessments will be provided for up to 6 locations.

A109- Inspection Technical Memorandum

The Consultant will evaluate which segments of the pipeline and appurtenances require repair or rehabilitation and prioritize these in terms of severity of need. For those segments not requiring any form of repair or rehabilitation, the Consultant will estimate remaining service life and develop recommendations periodic future condition monitoring. Note that remaining service life estimates will be based on the pipeline inspected and the accuracy will depend in part of the amount of assessments completed for the pipeline. If only Task A105 assessment is completed then the remaining life estimates will be less accurate than if subsequent steps are completed.

The Consultant will prepare a Technical Memorandum of pipeline inspection results, and present this to City staff for review and comment. The Technical Memorandum will summarize the pipeline condition assessments and corrosion evaluations and findings. The draft Technical Memorandum will be issued electronically along with ten hard copies. Consultant will present the findings included in Technical Memorandum and will discuss the draft at a progress meeting with the City. It is assumed that the City will provide comments to the Technical Memorandum within ten (10) business days after it is provided to the City, and Consultant will incorporate comments and subsequently issue the final Technical

Memorandum electronically along with ten hard copies within 10 business days after receiving all of the City's comments.

PROFESSIONAL SERVICES AGREEMENT – AMENDED EXHIBIT D

COMPENSATION

METHOD AND AMOUNT OF COMPENSATION

Compensation shall be hourly rates plus allowable reimbursable expenses.

DETAILED PROJECT COMPENSATION

The total amount of compensation paid to Black & Veatch Corporation, for full completion of all work required by the Project during the entire term of the Project must not exceed \$872,376.00.

Basic Consultant Fee	\$ 174,960.00
Amendment No. 1 (Additional Evaluation and Assessment Services)	\$ 697,416.00
Total Professional Services Fee	<u>\$ 872,376.00</u>

DETAILED PROJECT COMPENSATION

AMENDMENT NO. 1 Fee Schedule	
TASK	COST
Task 100 – Project Management	\$19,480.00
Task 200 - Assessment of Existing Facilities	\$162,562.00
Task 300 – Process Evaluations	Completed
Task 400 – Preliminary Design Report	\$33,192.00
Task 500 – Pyramid Peak WTP Aquifer Protection Permit	\$47,868.00
Task 600 – 60-inch Pipeline Step 1 Assessment Plan	\$31,731.00
Allowance for Pipeline Assessment (assessment method to be determined)118313	\$118,313.00
Sub-Consultant Allowance	\$234,270.00
Reimbursable Expenses	\$20,000.00
Owner's Contingency	\$30,000.00
TOTAL PROJECT COST:	\$697,416.00