Utility Name: DOUBLE DIAMOND UTILITIES CO
Docket Number: 36220-R (WATER) White Bluff
Date Examined: 29-Apr-10 8:16 AM
Date Referenced: 31-Dec-07

0

version: 20070403

DEPRECIATION ANALYSIS

Description	Acquired Date	Claimed Economic Life, yrs	Claimed Original Cost	% Used & Useful	Ver./Est. Original Cost	Economic Life, yrs	Actual Deprec. Life	Annual Deprec.	Accum. Deprec.	Net Plant*	% of plant paid for by developer	Contributions in Aid of Construction: Developer $	Contributions in Aid of Construction: Customer $
	$ 4,230.00												
	$ 1,500.00												
	$ 7,551.52												
	$ 274.49												
	$ 6,939.91												
	$ 4,817.34												
	$ 1,034.21												
	$ 14,210.00												
	$ 7,475.00												
	$ 500.00												
	$ 518.29												
	$ 738.27												
	$ 318.26												
	$ 1,686.54												
	$ 636.51												
	$ 331.66												
	$ 175.20												
	$ 2,705.00												
	$ 1,000.00												
	$ 4,875.00												
	$ 1,277.16												
	$ 375.09												
	$ 1,021.50												
	$ 3,690.00												
	$ 188.68												
	$ 9,801.82												
	$ 2,135.06												
	$ 621.31												
	$ 114.25												
	$ 9,620.00												
	$ 2,651.55												
	$ 15,400.00												
	$ 178.78												
	$ 358.58												
	$ 51.95												
	$ 13,117.50												
	$ 195.20												
	1457.5												
	$ 201.49												
	$ 56.61												
	$ 7,293.00												
	$ 63.64												
	$ 3,549.00												

Utility Name: DOUBLE DIAMOND UTILITIES CO

Docket Number: 36220-R (WATER) White Bluff

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version: 20070403

DEPRECIATION ANALYSIS

Description	Acquired Date	Claimed Economic Life, yrs	Claimed Original Cost	% Used & Useful	Ver./Est. Original Cost	Economic Life, yrs	Actual Deprec. Life	Annual Deprec.	Accum. Deprec.	Net Plant*	% of plant paid for by developer	Contributions in Aid of Construction: Developer $	Contributions in Aid of Construction: Customer $
	$ 5,674.50												
	$ 2,418.00												
	$ 1,930.50												
	$ 232.50												
	$ 2,409.28												
	$ 565.00												
	$ 518.93												
	$ 146.41												
	$ 1,500.00												
	$ 281.98												
	$ 4,584.00												
	$ 2,919.00												
	$ 255.00												
	$ 247.77												
	$ 1,962.45												
	$ 844.84												
	$ 2,024.60												
	$ 149.97												
	$ 1,467.48												
	$ 206,485.00												

Attachment BDD-5

Revenue Generated by Utility Proposed Rates		
The Cliffs		
RATES		
Base Rate		
5/8"	$	52.00
1"		130.00
1 1/2"		260.00
2"		416.00
3"		780.00
Volumetric		
0 - 3,000		2.60
3,000 - 10,000		3.00
10,000 - 15,000		5.07
15,000 - 20,000		8.56
20,000 +		14.45
Total		
No. of Meters (Dec. 2007)		
5/8"		215
1"		12
1 1/2"		1
2"		15
3"		1
Total		244
Gallons Billed		
0 - 3,000		1,128,734
3,000 - 10,000		3,740,968
10,000 - 15,000		2,420,480
15,000 - 20,000		1,837,877
20,000 +		15,696,707
Total		24,824,766
REVENUE		
Base Rate		
5/8"	$	134,160
1"		18,720
1 1/2"		3,120
2"		74,880
3"		9,360
Total revenue generated by base rates	$	240,240
Volumetric Revenue		
0 - 3,000		2,935
3,000 - 10,000		11,223
10,000 - 15,000		12,272
15,000 - 20,000		15,732
20,000 +		226,817
Total revenue generated by Volumetric Usage		268,979
Reveue Generated by Proposed rates	$	509,219
Revenue Required		366,908
Over / (Under) Recovery	$	142,311
		-28%

Attachment BDD-6

Revenue Generated by Proposed Rates		
The Retreat/White Bluff		
RATES		
Base Rate		
5/8"	$	39.00
1"		97.50
1 1/2"		195.00
2"		312.00
3"		585.00
Volumetric Charge per tier		
0 - 3,000		2.00
3,000 - 10,000		2.75
10,000 - 15,000		3.80
15,000 - 20,000		5.25
20,000 +		7.25
No. of Meters (Dec. 2007)		
5/8"		585
1"		18
1 1/2"		9
2"		10
3"		-
Total		622
Gallons Billed		
0 - 3,000		2,570,087
3,000 - 10,000		15,864,813
10,000 - 15,000		9,930,078
15,000 - 20,000		8,410,509
20,000 +		52,652,017
Total		89,427,504
REVENUE		
Base Rate		
5/8"	$	273,780
1"		21,060
1 1/2"		21,060
2"		37,440
3"		-
Total revenue generated by base rates	$	353,340
Volumetric Revenue		
0 - 3,000		5,140
3,000 - 10,000		43,628
10,000 - 15,000		37,734
15,000 - 20,000		44,155
20,000 +		381,727
Total revenue generated by Volumetric Usage		512,385
Reveue Generated by Proposed rates	$	865,725
Revenue Required		752,618
Over / (Under) Recovery	$	113,107
		-13%

Attachment BDD-7

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

version: *0*

Utility Name: DOUBLE DIAMOND UTILITIES CO

Docket Number: 36220-R (WATER) White Bluff

Customer Meters	No.:	Multiplier:	Conn. Equiv.
Number of 5/8x3/4" connections:	529	1.00	529.00
Number of 3/4" connections:		1.50	0.00
Number of 1" connections:	18	2.50	45.00
Number of 1-1/2" connections:	6	5.00	30.00
Number of 2" connections:	9	8.00	72.00
Number of 3" connections:	0	15.00	0.00
Number of 4" connections:		25.00	0.00
Number of 6" connections:		50.00	0.00
Total =	**562.00**		**676.00** Connection Equivalents

Utility/Customer Water Usage

Proposed Gallons Included In Minimum Bill =	0
Test Year Gallons Pumped (x 1,000) =	107,385
Test Year Gallons Billed (x 1,000) =	73,796

31.3% = percent lost

Attachment BDD-8

Double Diamond Utilities
White Bluff
Monthly Water Pumped (Gallons)

	2006 [1]	2007 [1]	2008 [1]
January	Data Not Avail.	5,804,100	7,619,600
February	Data Not Avail.	6,101,300	7,332,700
March	Data Not Avail.	8,196,200	7,986,900
April	6,574,800	6,872,900	7,416,900
May	9,745,300	8,107,100	11,057,200
June	14,076,800	8,184,600	16,577,400
July	8,784,800	9,467,500	19,893,200
August	18,573,600	13,412,100	19,233,800
September	13,627,100	11,517,800	14,213,000
October	11,647,000	11,629,500	11,634,100
November	8,958,700	10,741,300	9,557,900
December	7,452,500	7,350,500	7,819,200
Total	99,440,600	107,384,900	140,341,900

Notes
(1) Source: Well Pumping Reports

DDU011422

(1)

Double Diamond Utilities
The Cliffs
Monthly Treated Water Pumped (Gallons)

	2006 [1]	2007 [1]	2008 [2]
January	Data Not Avail.	1,025,000	1,885,000
February	1,778,000	1,201,000	1,340,000
March	2,209,000	1,763,000	1,624,000
April	2,910,000	1,943,000	927,000
May	2,649,000	2,037,000	4,142,000
June	3,485,000	1,608,000	4,525,000
July	3,563,000	2,197,000	4,671,000
August	4,046,000	689,000	5,433,000
September	2,694,000	1,953,000	3,890,000
October	2,940,000	970,000	3,625,000
November	2,419,000	730,000	3,501,000
December	1,482,000	1,202,000	3,165,000
Total	30,175,000	17,318,000	38,728,000

Notes
(1) Source: Surface Water Monitoring Reports
(2) Source: Surface Water Monitoring Report, Oct. from Internal DDU Report

DDU011560

(3)

Double Diamond Utilities The Retreat Monthly Water Pumped (Gallons)			
	2006 [1]	2007 [1]	2008 [2]
January	Data Not Avail.	Data Not Avail.	1,847,000
February	Data Not Avail.	Data Not Avail.	1,769,000
March	Data Not Avail.	Data Not Avail.	1,527,000
April	Data Not Avail.	Data Not Avail.	1,958,000
May	Data Not Avail.	Data Not Avail.	2,824,000
June	Data Not Avail.	Data Not Avail.	3,811,000
July	Data Not Avail.	Data Not Avail.	5,290,000
August	Data Not Avail.	Data Not Avail.	4,827,000
September	Data Not Avail.	Data Not Avail.	3,801,000
October	Data Not Avail.	3,881,000	3,006,000
November	Data Not Avail.	2,541,000	3,020,000
December	Data Not Avail.	1,504,000	2,230,000
Total	-	7,926,000	35,910,000

Notes

(1) Source: Monthly Ground Water Report

(2) Source: DDU Internal Documentation

DDU0116556

(3)

Attachment BDD-9

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2009

TRANSMITTED BY
FACSIMILE: 214/706-7829

Mr. Randy Gracy, President
Double Diamond Utilities Co.
10100 North Central Expressway, Suite 600
Dallas, Texas 75231

Re: Water Rate/Tariff Change Application of Double Diamond Utilities Co., in Hill, Palo Pinto, and Johnson Counties, Texas; Certificate of Convenience and Necessity No. 12087, Application No. 36220-R

CN: 600672349 RN: 101458115

Dear Mr. Gracy:

This letter is to inform you that Mr. Brian Dickey and I will be visiting your office on July 22-23, 2009, to perform an audit/review of the books and records for Double Diamond Utilities Company, Inc., (DDU). Failure to provide this information may result in disallowance of the unsupported expenses.

The scope of the audit will include picking up copies of the requested information and a review of records and documents supporting the cost of service. During the audit, you may be required to produce books, files and any other documents related to the application. We will need to review the following records in support of the application regarding the utility's cost of providing service for the test year. Please provide the records requested below in support of the application regarding DDU's cost of providing service. Unless otherwise specified, the requested records are for the test year, January 1, 2007 through December 31, 2008:

1. Copies of the general ledger for each water system. If the general ledger includes water and sewer utilities, please provide expenses for each utility;

2. Copies of the Balance Sheet and Profit and Loss Statements;

3. Copies of W-2s and 1099s for salaries and contract services;

4. Copies of the employee's timesheets and work orders;

5. Copies of organizational charts to include parent and affiliated companies;

6. Provide the name of employees as described on Attachment 3. For each individual identified in attachment 3, please provide:
   a. the beginning and ending dates of the individual's employment;
   b. the percentage of the individual's time devoted to working for the utility for each water or sewer system and non utility;

7. For each notes listed in Attachment 9, please provide copies of the signed notes payable to Double Diamond Delaware, Inc.;

8. Copies of income tax returns if DDU files its own income tax return, or the parent company's income tax return;

9. Please identify all companies or businesses owned, in whole or in part, or affiliated with DDU at any time from 2000 to the present;

10. Copies of coupons of the 1% regulatory assessment paid to TCEQ paid in 2008, and 2009;

11. Copies of all contracts with any affiliated companies, and contract services performed by outside contractors, if any;

12. Copies of invoices to support the amount listed on page 14 of the application, Section VI-Utility Income & Expense Information-Water::
   a. Purchased Water for $10,846. Please indicate the amount approved by the Commission for pass-through thru rates, if any;
   b. Chemicals and treatment for $10,050;
   c. Utilities for $132,249;
   d. Repairs & Maintenance for $387,723;
   e. Office Expense for $28,774;
   f. Accounting and Legal for $28,774. Please indicate the amount incurred for services rendered in connection with compliance and enforcement, CCN and STM applications that are included in this amount;
   g. Insurance for $28,479;
   h. Rental agreement for the office space occupied by DDU's headquarters. If DDU shares this space with affiliated or subsidiary companies, please provide the square footage utilized by DDU;
   i. Property and other taxes for $5,806;

13. Calculation of return worksheet;

14. General ledger or list of expenses for Allocated Resort Overhead – Miscellaneous in the amount of $35,621, and supporting invoices or documentation;

15. Please explain in detail the water tap expense – Miscellaneous in the amount of $58,835. What costs are included in this amount?

16. For each water and sewer system that DDU provide utility service, please list all meter sizes for condos, resorts, hotels, restaurants, golf course, boat ramps, irrigation meters, etc., owned by DDU's parent or its parent companies. Please include the address for each meter and gallons consumed for 2007 and 2008.

17. Copies of the Chart of Accounts for all systems.

18. A copy of all invoices for the water asset including the known additions listed in the Water Application;

19. Electronic copy in excel format of the monthly summary of water gallons billed, pumped, and purchased for each system listed in the Application;

20. The number of active water connections for each subdivision listed in the Application at the beginning and the end of the test year;

21. Copies of DDU's customer complaint log and the resolution of each complaint which occurred during the test year;

22. Please explain in detail how the last rate increase was used, which systems benefited, and what work, if any was completed;

23. Monthly summary of water gallons billed and customers, for 0 to 999 gallons, 1,000 to 1,999 gallons, 2,000 to 2,999 gallons, 3,000 to 3,999 gallons, 4,000 to 4,999 gallons, 5,000 to 5,999 gallons, 6,000 to 6,999 gallons, 7,000 to 7,999 gallons, 8,000 to 8,999 gallons, 9,000 to 9,999 gallons, 10,000 to 10,999 gallons, 11,000 to 11,999 gallons, 12,000 to 12,999 gallons, 13,000 to 13,999 gallons, 14,000 to 14,999 gallons, 15,000 to 15,999 gallons, 16,000 to 16,999 gallons, 17,000 to 17,999 gallons, 18,000 to 18,999 gallons, 19,000 to 19,999 gallons, 20,000 gallons thereafter.

24. Please provide all work papers used in calculating the proposed rate for the Retreat, and White Bluff systems;

25. Please provide all work papers used in calculating the proposed rate for the Cliffs subdivision;

26. Please provide the total number of taps installed during the test year;

27. Please provide supporting documentation for the proposed $30.00 returned check charge;

28. Please provide supporting documentation for the $525.00 tap fee;

29. Page 15 of the application indicates that there are 828 active connections. Does this number also include all taps which Double Diamond, Inc., is using to provide service to any of their facilities such as the conference centers, sales offices, hotels, and etc;

28. For each subdivision please provide the local address where customers can pay there bills;

29. Please provide an inventory of the water utility plant being used to provide water service that was paid for by the development company Double Diamond Inc or any developer;

30. Copies of organizational charts to include parent and affiliated companies;
31. A copy of a few of the customer bills showing meter consumption;

32. Please explain in detail all the factors that were considered when designing the proposed water rates.

33. Please list all inventory being used to provide water or sewer service that was paid for by developers. Please include installation dates and the original cost of the water utility plant.

34. For any item listed in the depreciation schedule that has been trended, please provide documentation showing that the asset was paid for by the utility, by any developers, or by customer contributions in aid of construction.

35. Please explain how you have shown or will show that the Application meets the requirements of Texas Water Code § 13.145.

36. Please provide a separate depreciation schedule listing each individual asset for the Retreat, White Bluff and The Cliffs. Provide a paper copy and an electronic copy in excel format.

37. Please provide the total gallons of sewage treated and total gallons billed to the customers for the test year for each system.

38. Please provide the latest inspection reports for all the water and sewer systems that are involved in this rate case.

39. Please provide an electronic copy in excel format of attachment 5, attachment 6, attachment 9, attachment 10, attachment 11, and attachment 12.

40. Please provide copies of the general ledger for all interest expenses and penalties that are included in the cost of service. Include the name of the payee and the purpose.

41. Please provide a copy of the documentation showing how the Applicant calculated the revenue increase listed in the notice. Include the breakdown between water and sewer.

42. Please provide an electronic copy in excel format the monthly reports detailing the total gallons of water pumped and total gallons of water billed to the customers for the test year for each system.

43. Please provide an electronic copy in excel format of your number of customers by rate classification and meter size by month for the test year. Please provide an electronic copy in excel format of the volumetric usage by month for the test year for each rate classification and meter size.

44. Please provide a copy of all invoices (showing installation dates, original costs, and capacities) for the assets listed in the depreciation schedule in the Application. Please differentiate in your answer whether the asset amount was paid for by the utility, developer or customer.

45. Please provide a list of all items that were financed by an affiliate of you and note the corresponding affiliates' name.

46. Please provide a list of all items financed by customer contributions and the customers' names.

47. Please provide a list of items financed by developer contributions and identify the developers.

48. Please provide copies of the "Rate of Return Worksheet" that was used to calculate the 12 % return requested in the application.

49. For any item listed in the depreciation schedule that has been trended, please provide a copy of the documentation showing that the asset was paid for either by the utility, by any developers, or by customer contributions in aid of construction.

50. Please provide a copy of an excel worksheet of the individual assets which formulate the different categories listed in the water depreciation schedule.

51. Please provide a copy of all detailed workpapers, cost studies, or other data supporting all proposed tariff changes, adjustments to revenues, expenses, rate base, and other supporting data to the Application. Please provide computer files containing schedules for all computer-based calculations.

52. Please provide a copy of your Cost Allocation Study and support for any proposed changes in rate design.

53. Provide copies of all work papers, preliminary work papers, draft work papers, internal correspondence, emails, electronic spreadsheets, or other computer rate-related studies including plant and equipment schedules prepared by the applicant to calculate the water Known and Measurable change in annual depreciation of ($61,475) claimed in the original application in column 2 table VI A.

54. Provide copies of all work papers, preliminary work papers, draft work papers, internal correspondence, emails, electronic spreadsheets, or other computer rate-related studies including plant and equipment schedules prepared by the applicant to calculate the water annual depreciation of $137020 claimed in the original application and the revised application in column 2 table VI A.

If you have any further questions, please contact me at 512/239-5367 or Mr. Brian Dickey at (512) 239-0963, or if by written correspondence, include MC 153 in the letterhead address.

Sincerely,

Elsie N. Pascua, Staff Auditor
Utilities & Districts Section
Water Supply Division

** Transmit Conf. Report **

P. 1 Ju 10 2009 16:44

Fax/Phone Number	Mode	Start	Tim	Page	Resu t	Note
912147067829	NORMAL	10, 16:44	1'2-	6	# 0	

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2009

TRANSMITTED BY
FACSIMILE: 214/706-7829

Mr. Randy Gracy, President
Double Diamond Utilities Co.
10100 North Central Expressway, Suite 600
Dallas, Texas 75231

Re: Water Rate/Tariff Change Application of Double Diamond Utilities Co., in Hill, Palo Pinto, and Johnson Counties, Texas; Certificate of Convenience and Necessity No. 12087, Application No. 36220-R

CN: 600672349 RN: 101458115

Dear Mr. Gracy:

This letter is to inform you that Mr. Brian Dickey and I will be visiting your office on July 22-23, 2009, to perform an audit/review of the books and records for Double Diamond Utilities Company, Inc., (DDU). Failure to provide this information may result in disallowance of the unsupported expenses.

The scope of the audit will include picking up copies of the requested information and a review of records and documents supporting the cost of service. During the audit, you may be required to produce books, files and any other documents related to the application. We will need to review the following records in support of the application regarding the utility's cost of providing service for the test year. Please provide the records requested below in support of the application regarding DDU's cost of providing service. Unless otherwise specified, the requested records are for the test year, January 1, 2007 through December 31, 2008:

1. Copies of the general ledger for each water system. If the general ledger includes water and

(7)

Attachment BDD-10

File PWS 1820061/CO
CN600672349
RN101265213

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 31, 2008

Mr. C. Raajan Mehta, P.E.
Mehta West Brashear Group LLC
4141 Blue Lake Circle, Suite 133
Dallas, Texas 75244

Subject: Request for an Exception to Use HF Membranes as Pretreatment for RO Membranes
HF Membrane Pilot Study Report
The Cliffs - PWS ID #1820061
Palo Pinto County, Texas

Dear Mr. Mehta:

We have reviewed the hollow-fiber (HF) ultrafiltration (UF) membrane filtration pilot study report received with your cover letter dated December 13, 2007. The pilot study was conducted at The Cliffs existing surface water treatment plant (SWTP) and reverse osmosis (RO) membrane plant located on Possum Kingdom Lake. Two HF membrane units each containing five (5) Norit X-Flow SXL 225 PVC 0.8 UFC HF UF membrane modules were piloted in front of the existing two pressure filters that currently provide feed water to the RO membrane units. The use of treatment processes and equipment for the treatment of surface water in lieu of the minimum specifications in 30 TAC §290.42(d) are considered innovative technologies as specified in 30 TAC §290.42(g) and are reviewed as exceptions under 30 TAC §290.29(l).

Your cover letter states that the pilot study protocol accepted in our letter dated August 31, 2007, was modified to include data collection only for replacing the existing pressure filters as pretreatment for the RO membranes and not for pathogen removal credit and blending with the RO permeate as originally proposed. Your pilot study report was reviewed based on this modification and request. However, this modification generated several concerns based on the Texas Commission on Environmental Quality's (TCEQ) recent rule revisions to Subchapter D and F of 30 TAC §290. These rule revision regarding design, operation and removal credits for SWTPs using membrane filtration and other treatment processes were to comply with the US EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). The TCEQ's concerns are addressed in this letter after our response to your exception request to use coagulation and direct HF UF membrane filtration in lieu of conventional pretreatment (coagulation, mixing, flocculation and sedimentation/clarification) as required in 30 TAC §290.42(d) for systems treating surface water.

Based on our review of your submitted pilot study report, we are unable to complete our review and are denying your request for an exception at this time. Please clarify and provide the following information and data. All of the requested data needs to be in hard copy form to facilitate our review. Electronic data may not be submitted in lieu of hard copies. Please note that the Excel file for Stage II filtrate turbidity contains days for Stage I. Graphs should be originals, in color and all reported data is to be in English units, not metric. Failure to provide the requested data will result in the TCEQ denying the requested exception to replace the pressure filters with coagulation and HF UF membrane modules.

1. Provide a detailed flow diagram of the piloted treatment train identifying all flow monitoring devices, chemical injection points, water quality monitoring points, pumps, treatment equipment pre and post to the HF UF membrane units. This flow diagram needs to start at the raw water pumps and end at the high service pumps. Include all raw water reservoirs or storage tanks and intermediate storage tanks with their volumes and corresponding hydraulic detention times for each piloted flow rate. The provided copies must be legible. The Layne drawing on Page 4 of your letter we received was not readable.

2. Provide all data on the different coagulant dosages used during the pilot study and the dates whenever the dosages were modified.

3. Provide a detailed operation of each backwash and chemical enhanced backwash (CEB) procedure used during the pilot study and when the procedures were modified. The durations a HF UF membrane unit was out of service for a backwash or CEB must be inclusive of all time, such sequencing of valves, a unit was off line. As stated in our letter accepting the pilot study protocol, your pilot study protocol needed to be amended to include the pH level and disinfectant residual during at least one backwash each day. Please provide the pH and disinfectant residual information.

   Your report included the chemicals to be used for CEBs, 6.0-percent sodium hypochlorite and 32-percent muriatic acid, but not the chlorine residual and pH levels of the CEB solutions during the pilot study. It is noted that Item #7 of Section 1.3-Cleaning Procedure Data of your report references an Appendix G for pH levels of the CEB solution. There was not an Appendix G with the pilot study report received by TCEQ. This section of your pilot study report also stated that backwash flow rate data was in Appendix C and backwash duration data was in Appendix D, but this data was not found in either Appendix during our review.

4. Provide historical data, preferably five years, for the daily raw water turbidity levels experienced by the existing SWTP. Include a table showing the minimum, average, 95-percentile and maximum levels of the historical data in a comparison table to the same raw water turbidity levels during the 90 days of piloting. It is noted that our letter accepting the pilot study protocol stated that the protocol had to be amended to include piloting of a turbidity spike if conventional pretreatment was to not be included and a raw water turbidity event representative of the historical high raw water turbidity level did not occur as a result of a rain event during Stage II piloting.

5. As stated in our letter accepting the pilot study protocol, provide the dates, durations and amounts of rainfall during the pilot study.

6. Provide the necessary quantity of RO membrane feed water required to meet the TCEQ's minimum required capacity of 0.6 gpm per connection based on the existing RO membranes' TCEQ approved net permeate production, permeate flux rate and rejected concentrate.

7. Explain how you arrived at a maximum recommended instantaneous filtrate flux of 60.0 gallons per square-foot per day (gfd). Based on our review of the submitted tables and graphs, we did not find where the pilot study verified a continuous instantaneous filtrate flux rate of 60.0 gfd for the piloted HF UF membrane modules. A HF membrane unit, or any other treatment process, must be piloted at, or greater than, the requested loading rate during simulated full-scale operation for at least 30 days. Based on our review this did not occur. Reported flux rates at ambient

temperatures for HF UF membrane units A and B were never greater than approximately 52 gfd and were less than 10 gfd on several occasions during Stage II and III piloting.

As pretreatment units, the TCEQ still must have piloted data for this site-specific feed water quality supporting the required capacity for the proposed HF UF membranes. Then the TCEQ can then determine the minimum number of HF UF Norit X-Flow membrane modules necessary and verify that the minimum treatment capacity requirement for this SWTP will be met.

8. Provide a graph showing the instantaneous HF UF membrane filtrate flux rates and corresponding feed water temperatures for the pilot study period.

9. Explain how feeding ferric chloride reduced oreliminated the HF UF and RO membrane feed water problems encountered during pilot study rainfall events.

10. Since the resulting purpose of the HF UF membrane pilot study was to develop an acceptable RO membrane feed water quality, provide silt density index (SDI) data for the HF UF membrane filtrate during the pilot study and historical SDI data for the existing pressure filters in a comparison table.

11. Include data for any cleaning of the HF UF and RO membranes that occurred as a result of rainfall events and increased total suspended solids (TSS) noted in Item "g" on Page 12 of your submittal.

12. Include specific data as to when the ferric chloride pretreatment began, the dosages piloted, injection point or points, mixing equipment, flocculation hydraulic detention time and subsequent monitoring indicating that this process resulted in the reduction of the fouling in of the HF UF and RO membranes and the TSS reduction in the HF UF membrane filtrate.

13. Include all equipment calibration records for analytical equipment during the pilot study. This includes both benchtop and online continuous monitoring equipment. Include documentation verifying that the flow indicating devices were calibrated with the 12 months prior to startup of the pilot study and documentation for any that were calibrated during the pilot study.

    Your report states that the HACH FilterTrac 660 was calibrated at the factory and only required by the manufacturer to be recalibrated once every three months or after a significant repair. The TCEQ requires this piece of online monitoring equipment to be calibrated in accordance with our requirements in accordance with 30 TAC §290.46(s)(2)(B) during a pilot study. This was also noted our pilot study protocol acceptance letter which referenced Item X.A. of our Review of Pilot Study Protocols for Membrane Filtration. It is also specified in Item XI.A of Review of Pilot Study Reports for Membrane Filtration.

14. Submit copies of test pressures and pressure decay rates for each direct integrity test conducted during the pilot study. Include documentation for any repair work when one of the HF UF membrane units failed a direct integrity test and the subsequent direct integrity test that verified the repair work corrected the problem. Although you are not requesting (and the TCEQ cannot grant based on the submitted pilot study report data) pathogen removal credits, the direct integrity tests results verifies the continuous operating condition of each HF UF membrane unit during the 90 days of piloting.

It was noted during the pilot study that multiple HF UF membrane filtrate turbidity levels greater than 0.100 NTU occurred. During Stage I testing, some filtrate turbidity levels exceeded 1.0 NTU. Based on our experience and conversations with HF membrane plant operators and manufacturers, these high turbidity levels indicate a problem with the membranes, seals, potting or the monitoring equipment. If none of these problems were found to explain these elevated filtrate turbidity events, then the TCEQ staff has a concern that the proposed HF UF membrane units cannot maintain a consistent acceptable RO membrane feed water quality under varying raw water qualities.

You provided a copy of ASTM Standard D6908-06, Standard Practice for Integrity Testing of Water Filtration Membrane Systems and a maximum pressure decay rate of 0.08 bar per minute (needs to be converted to English units) is allowed to verify a 3.0-micron defect in one Norit X-Flow HF UF membrane module. However, we were unable to find the test pressures used, pressure decay rates, water temperatures and times for each direct integrity test of the HF UF membrane units conducted during the pilot study. Please verify with the membrane manufacturer that the above test pressure is applicable for a direct integrity test of a membrane unit containing more than one membrane module/element.

15. Please include your calculations and which corresponding raw water and HF UF membrane turbidity readings were used for determining the log removal values reported in Figure 3.2 of your report and Appendix B. Please resubmit **individual** graphs for HF UF membrane units A and B showing graphing the results of your calculations.

16. Please address conflicts in the approved CT Study treatment train and what was reported in your pilot study report. Review of our most recent CT study letter of April 8, 2003, for The Cliffs reported that this SWTP had eight (8) pressure filters followed by two 5.0-micon cartridge filters. Your letter stated that there are currently only two (2) pressure filters and did not list the cartridge filters. We did not find any correspondence to the TCEQ noting this change in treatment capacity as required by 30 TAC §290.39(j)(1). If there has been a reduction in the number of pressure filters, provide copies of written TCEQ notice and response to this reduction.

17. Please provide pilot study or full-scale data demonstrating an RO membrane permeate flux rate and net permeate production can meet the TCEQ's minimum capacity requirements for this system if adequate pretreatment is installed. Include what the limiting RO membranes' feed water qualities would be. The above referenced CT study letter stated that the TCEQ rated capacity for this SWTP is only 0.173 MGD. Our most recent Comprehensive Compliance Investigation indicated this system has 208 connections which results in a minimum required SWTP capacity of 0.180 MGD, or greater, based on 30 TAC §290.45(b)(2)(B). We do not have data indicating that the RO membranes can meet this additional loading.

18. Provide copies of The Cliffs' completed Membrane Monthly Operating Report (MMOR) for the RO membranes. Please note all SWTPs using membranes for pathogen removal are required to complete a MMOR addendum and submit it with their Surface Water Monthly Operating Report. If the operators have failed to meet this requirement, please provide copies of their daily RO membrane units' continuous indirect integrity monitoring, weekly direct integrity monitoring data results and any chemical cleans during the pilot study period. Include the method for each type of test and TCEQ required calibration of continuous online monitoring equipment. A copy of the direct integrity test procedure must be included. This data is to verify that the integrity of the RO membranes was not compromised during the pilot study period.

TCEQ Concerns Regarding Continued Use of RO Membranes Only for Pathogen Removal Credits

- As noted previously, the TCEQ has recently revised our rules to comply with the US EPA's LT2ESWTR and other recently adopted amendments to the Safe Drinking Water Act. In order for the State of Texas to maintain primacy for public drinking water in Texas, the TCEQ is required to adopt rules at least as stringent and is in the process of revising our guidance documents regarding design, operation and removal credits for SWTPs using membrane filtration and other treatment processes to comply with the US EPA's LT2ESWTR. Both Subchapters D and F of 30 TAC Chapter 290 were revised. You may download our new rules from our website at the addresses below:

  http://www.tceq.state.tx.us/assets/public/legal/rules/rules/pdflib/290d.pdf
  http://www.tceq.state.tx.us/assets/public/legal/rules/rules/pdflib/290f.pdf

  The granted removal credits for pathogens are based on the TCEQ approval of direct integrity tests and continuous indirect integrity monitoring methods. Removal credits for *Giardia lamblia* cysts and *Cryptosporidium* oocysts will be based on the required continuous indirect integrity monitoring of each membrane unit's filtrate/permeate with a Hach Model 660 FilterTrak laser turbidimeters, or an acceptable TCEQ alterative. The direct integrity test method must use a test pressure with a resolution to detect at least a 3.0-micron defect in each membrane unit and a sensitivity to verify the required log removal value. With the TCEQ's recent rule revisions we are now accepting the calculations for determining the test pressure level that detects a 3.0-micron defect for each vendor's membrane unit as it is specified in the US EPA's Membrane Filtration Guidance Manual – EPA 815-R-06-009, November 2005. Please reference equations 4.13 and 4.14 in this manual for RO membrane pressure type direct integrity tests and Equations 4.6 and 4.7 for HF UF membranes. Based on these requirements, data for the TCEQ to review the CT study and the SWTP operators to complete a required "Membrane Monthly Operating Report" addendum will need to include:

  a. volume of pressurized air (V_{sys}) in each membrane unit (note: unit not module) during a direct integrity test;
  b. maximum back pressure (BP_{max}) on each membrane unit during a direct integrity test;
  c. air-liquid conversion ratio (ALCR);
  d. flow of air through the critical breach during a pressure based direct integrity test (Q_{air});
  e. flow of water through the critical breach during filtration (Q_{breach});
  f. design capacity filtrate/permeate flow (Q_p);
  g. smallest rate of pressure decay that can be reliably measured and associated with a known breach during the direct integrity test (ΔP_{test}) and,
  h. volumetric concentration factor (VCF).

  At this time, the TCEQ is continuing to only require a direct integrity test once per week, after two consecutive 5-minute filtrate readings of 0.10 NTU or greater, and after each CIP procedure with continuous indirect integrity monitoring of each unit's filtrate turbidity levels using the Hach Model 660 FilterTrak laser turbidimeter, or an acceptable TCEQ alternative. However, these requirements may change for specific membrane filtration SWTPs in the future based on the results of required raw surface water monitoring and any required additional log removal requirements for pathogens. The TCEQ approved capacity rating for membrane filtration SWTPs may also be revised at that time.

  Based on the requirements of the US EPA's LT2ESWTR and TCEQ's newly revised rules, each Texas public water system installing or replacing membranes that are used for microbiological

treatment after April 1, 2012, can continue to receive removal credit for *Cryptosporidium* oocysts and *Giardia lamblia* cysts if they meet the specifications in 30 TAC §290.42(g)(3)(A) and §290.111. This will include providing data for TCEQ review and approval to verify their membrane's Challenge Test Log Removal Value (LRV_{CT}), Non-Destructive Performance Testing (NDPT) method, corresponding Quality Control Release Value (QCRV) and method for the Direct Integrity Test Log Removal Value (LRV_{DIT}) as specified in the US EPA's LT2ESWTR and "Membrane Filtration Guidance Manual." It is unclear yet which systems in Texas may be required to provide additional removal of pathogens until the required raw surface water sampling noted above is complete. Without the above specific membrane data, the TCEQ may not be able to continue to grant a membrane SWTP the necessary removal credits for *Giardia lamblia* cysts and *Cryptosporidium* oocysts.

Each public water system using, or planning to use, membranes to comply with the treatment technique requirements, needs to review the US EPA's LT2ESWTR and upcoming TCEQ rule revisions to ensure that their membrane manufacturer is pursuing compliance with the future requirements for their SWTP under the US EPA's LT2ESWTR in Texas.

- The pilot study was not conducted to verify the HF UF membranes **capacity** or **pathogen removal credit.**

- Most systems have not been able to conduct the required direct integrity tests on RO membranes that are currently required.

If you have any questions regarding this letter or if we may be of further assistance, please contact us at the letterhead address or me telephone at (325) 481-8056.

Sincerely,

James "Red" Weddell

James "Red" Weddell, P.E.
Technical Review & Oversight Team
Public Drinking Water Section - MC 155
Texas Commission on Environmental Quality

JSW/av

cc: Mr. Richard Tuck, Double Diamond Utilities, 10100 N Central Expressway, Suite 600, Dallas, TX 75231-4156

Attachment BDD-11

Revenue Generated by existing Rates		
The Retreat/White Bluff		
RATES		
Base Rate		
5/8"	$	30.00
1"		50.10
1 1/2"		99.90
2"		159.80
3"		320.00
Volumetric Charge per tier		
0 - 1,000		-
1,000 - 10,000		1.85
10,000 - 20,000		2.10
20,000 +		4.75
No. of Meters (Dec. 2007)		
5/8"		585
1"		18
1 1/2"		9
2"		10
3"		-
Total		622
Gallons Billed		
0 - 1,000		310,969
1,000 - 10,000		18,123,931
10,000 - 20,000		18,340,587
20,000 +		52,652,017
Total		89,427,504
REVENUE		
Base Rate		
5/8"	$	210,600
1"		10,822
1 1/2"		10,789
2"		19,176
3"		-
Total revenue generated by base rates	$	251,387
**********		
Volumetric Revenue		
0 - 1,000		-
1,000 - 10,000		33,529
10,000 - 20,000		38,515
20,000 +		250,097
Total revenue generated by Volumetric Usage		322,142
**********		
Reveue Generated by Existing rates	$	573,528

Attachment BDD-12

Revenue Generated by ED Proposed Rates	
The Retreat/White Bluff	
RATES	
Base Rate	
5/8"	$ 26.52
1"	66.30
1 1/2"	132.60
2"	212.16
3"	397.80
Volumetric Charge per tier	
0 - 3,000	2.00
3,000 - 10,000	2.75
10,000 - 15,000	3.80
15,000 - 20,000	5.25
20,000 +	7.25
No. of Meters (Dec. 2007)	
5/8"	585
1"	18
1 1/2"	9
2"	10
3"	-
Total	622
Gallons Billed	
0 - 3,000	2,570,087
3,000 - 10,000	15,864,813
10,000 - 15,000	9,930,078
15,000 - 20,000	8,410,509
20,000 +	52,652,017
Total	89,427,504
REVENUE	
Base Rate	
5/8"	$ 186,170
1"	14,321
1 1/2"	14,321
2"	25,459
3"	-
Total revenue generated by base rates	$ 240,271
Volumetric Revenue	
0 - 3,000	5,140
3,000 - 10,000	43,628
10,000 - 15,000	37,734
15,000 - 20,000	44,155
20,000 +	381,727
Total revenue generated by Volumetric Usage	512,385
Reveue Generated by Proposed rates	$ 752,656
Revenue Required	752,618
Over / (Under) Recovery	$ 38
	0%

Attachment BDD-13

SECTION 1.0 - RATE SCHEDULE

Section 1.01 - Rates

Meter Size	Monthly Minimum Charge	Gallonage Charge
5/8" or 3/4"	$19.19 (Includes zero gallons)	$2.60 per 1000 gallons, 0 - 3,000 gallons
1"	$47.98	$3.00 per 1000 gallons, 3,001 -10,000 gallons
1½ "	$95.95	$5.07 per 1000 gallons, 10,001-15,000 gallons
2"	$153.52	$8.56 per 1000 gallons, 15,001-20,000 gallons
3"	$287.85	$14.45 per 1000 gallons, 20,001 gallons and thereafter

FORM OF PAYMENT: The utility will accept the following forms of payment:
Cash X, Check X, Money Order X, Credit Card X, Other (specify)_____
THE UTILITY MAY REQUIRE EXACT CHANGE FOR PAYMENTS AND MAY REFUSE TO ACCEPT PAYMENTS MADE USING MORE THAN $1.00 IN SMALL COINS. A WRITTEN RECEIPT WILL BE GIVEN FOR CASH PAYMENTS.

REGULATORY ASSESSMENT 1.0%
TCEQ RULES REQUIRE THE UTILITY TO COLLECT A FEE OF ONE PERCENT OF THE RETAIL MONTHLY BILL.

Section 1.02 - Miscellaneous Fees

TAP FEE $675.00
TAP FEE COVERS THE UTILITY'S COSTS FOR MATERIALS AND LABOR TO INSTALL A STANDARD RESIDENTIAL 5/8" or 3/4" METER. AN ADDITIONAL FEE TO COVER UNIQUE COSTS IS PERMITTED IF LISTED ON THIS TARIFF.

TAP FEE (Large meter) ..... Actual Cost
TAP FEE IS THE UTILITY'S ACTUAL COST FOR MATERIALS AND LABOR FOR METER SIZE INSTALLED.

METER RELOCATION FEE ..... Actual Relocation Cost, Not to Exceed Tap Fee
THIS FEE MAY BE CHARGED IF A CUSTOMER REQUESTS THAT AN EXISTING METER BE RELOCATED.

METER TEST FEE $25.00
THIS FEE WHICH SHOULD REFLECT THE UTILITY'S COST MAY BE CHARGED IF A CUSTOMER REQUESTS A SECOND METER TEST WITHIN A TWO-YEAR PERIOD AND THE TEST INDICATES THAT THE METER IS RECORDING ACCURATELY. THE FEE MAY NOT EXCEED $25.

RATES LISTED ARE EFFECTIVE ONLY
IF THIS PAGE HAS TCEQ APPROVAL STAMP

SECTION 1.0 - RATE SCHEDULE (CONT.)

RECONNECTION FEE

THE RECONNECT FEE MUST BE PAID BEFORE SERVICE CAN BE RESTORED TO A CUSTOMER WHO HAS BEEN DISCONNECTED FOR THE FOLLOWING REASONS (OR OTHER REASONS LISTED UNDER SECTION 2.0 OF THIS TARIFF):

a) Non payment of bill (Maximum $25.00) $25.00
b) Customer's request that service be disconnected $25.00

TRANSFER FEE $25.00

THE TRANSFER FEE WILL BE CHARGED FOR CHANGING AN ACCOUNT NAME AT THE SAME SERVICE LOCATION WHEN THE SERVICE IS NOT DISCONNECTED

LATE CHARGE (EITHER $5.00 OR 10% OF THE BILL) 10%

TCEQ RULES ALLOW A ONE-TIME PENALTY TO BE CHARGED ON DELINQUENT BILLS. A LATE CHARGE MAY NOT BE APPLIED TO ANY BALANCE TO WHICH THE PENALTY WAS APPLIED IN A PREVIOUS BILLING.

RETURNED CHECK CHARGE $30.00

RETURNED CHECK CHARGES MUST BE BASED ON THE UTILITY'S DOCUMENTABLE COST.

CUSTOMER DEPOSIT RESIDENTIAL (Maximum $50) $50.00

COMMERCIAL & NON-RESIDENTIAL DEPOSIT ..... 1/6TH OF ESTIMATED ANNUAL BILL

GOVERNMENTAL TESTING, INSPECTION AND COSTS SURCHARGE

WHEN AUTHORIZED IN WRITING BY TCEQ AND AFTER NOTICE TO CUSTOMERS, THE UTILITY MAY INCREASE RATES TO RECOVER INCREASED COSTS FOR INSPECTION FEES AND WATER TESTING 30 TAC 291.21(K)(2).

LINE EXTENSION AND CONSTRUCTION CHARGES:

REFER TO SECTION 3.0--EXTENSION POLICY FOR TERMS, CONDITIONS, AND CHARGES WHEN NEW CONSTRUCTION IS NECESSARY TO PROVIDE SERVICE.

RATES LISTED ARE EFFECTIVE ONLY
IF THIS PAGE HAS TCEQ APPROVAL STAMP

Attachment BDD-14

SECTION 1.0 - RATE SCHEDULE (CONT.)

Section 1.01 - Rates

Meter Size	Monthly Minimum Charge	Gallonage Charge
5/8" or 3/4"	$26.52 (Includes zero gallons)	$2.00 per 1000 gallons, 0 - 3,000 gallons
1"	$66.30	$2.75 per 1000 gallons, 3,001 -10,000 gallons
1½ "	$132.60	$3.80 per 1000 gallons, 10,001-15,000 gallons
2"	$212.16	$5.25 per 1000 gallons, 15,001-20,000 gallons
3"	$397.80	$7.25 per 1000 gallons, 20,001 gallons and thereafter

FORM OF PAYMENT: The utility will accept the following forms of payment:
Cash X , Check X , Money Order X , Credit Card X , Other (specify)_____
THE UTILITY MAY REQUIRE EXACT CHANGE FOR PAYMENTS AND MAY REFUSE TO ACCEPT PAYMENTS MADE USING MORE THAN $1.00 IN SMALL COINS. A WRITTEN RECEIPT WILL BE GIVEN FOR CASH PAYMENTS.

REGULATORY ASSESSMENT 1.0%
TCEQ RULES REQUIRE THE UTILITY TO COLLECT A FEE OF ONE PERCENT OF THE RETAIL MONTHLY BILL.

Section 1.02 - Miscellaneous Fees

TAP FEE $675.00
TAP FEE COVERS THE UTILITY'S COSTS FOR MATERIALS AND LABOR TO INSTALL A STANDARD RESIDENTIAL 5/8" or 3/4" METER. AN ADDITIONAL FEE TO COVER UNIQUE COSTS IS PERMITTED IF LISTED ON THIS TARIFF.

TAP FEE (Large meter) ..... Actual Cost
TAP FEE IS THE UTILITY'S ACTUAL COST FOR MATERIALS AND LABOR FOR METER SIZE INSTALLED.

METER RELOCATION FEE ..... Actual Relocation Cost, Not to Exceed Tap Fee
THIS FEE MAY BE CHARGED IF A CUSTOMER REQUESTS THAT AN EXISTING METER BE RELOCATED.

METER TEST FEE $25.00
THIS FEE WHICH SHOULD REFLECT THE UTILITY'S COST MAY BE CHARGED IF A CUSTOMER REQUESTS A SECOND METER TEST WITHIN A TWO-YEAR PERIOD AND THE TEST INDICATES THAT THE METER IS RECORDING ACCURATELY. THE FEE MAY NOT EXCEED $25.

RATES LISTED ARE EFFECTIVE ONLY
IF THIS PAGE HAS TCEQ APPROVAL STAMP

SECTION 1.0 - RATE SCHEDULE (CONT.)

RECONNECTION FEE

THE RECONNECT FEE MUST BE PAID BEFORE SERVICE CAN BE RESTORED TO A CUSTOMER WHO HAS BEEN DISCONNECTED FOR THE FOLLOWING REASONS (OR OTHER REASONS LISTED UNDER SECTION 2.0 OF THIS TARIFF):

a) Non payment of bill (Maximum $25.00) $25.00
b) Customer's request that service be disconnected $25.00

TRANSFER FEE $25.00

THE TRANSFER FEE WILL BE CHARGED FOR CHANGING AN ACCOUNT NAME AT THE SAME SERVICE LOCATION WHEN THE SERVICE IS NOT DISCONNECTED

LATE CHARGE (EITHER $5.00 OR 10% OF THE BILL) 10%

TCEQ RULES ALLOW A ONE-TIME PENALTY TO BE CHARGED ON DELINQUENT BILLS. A LATE CHARGE MAY NOT BE APPLIED TO ANY BALANCE TO WHICH THE PENALTY WAS APPLIED IN A PREVIOUS BILLING.

RETURNED CHECK CHARGE $30.00

RETURNED CHECK CHARGES MUST BE BASED ON THE UTILITY'S DOCUMENTABLE COST.

CUSTOMER DEPOSIT RESIDENTIAL (Maximum $50) $50.00

COMMERCIAL & NON-RESIDENTIAL DEPOSIT ..... 1/6TH OF ESTIMATED ANNUAL BILL

GOVERNMENTAL TESTING, INSPECTION AND COSTS SURCHARGE

WHEN AUTHORIZED IN WRITING BY TCEQ AND AFTER NOTICE TO CUSTOMERS, THE UTILITY MAY INCREASE RATES TO RECOVER INCREASED COSTS FOR INSPECTION FEES AND WATER TESTING 30 TAC 291.21(K)(2).

LINE EXTENSION AND CONSTRUCTION CHARGES:

REFER TO SECTION 3.0--EXTENSION POLICY FOR TERMS, CONDITIONS, AND CHARGES WHEN NEW CONSTRUCTION IS NECESSARY TO PROVIDE SERVICE.

RATES LISTED ARE EFFECTIVE ONLY
IF THIS PAGE HAS TCEQ APPROVAL STAMP

Attachment BDD-15

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

version:

Utility Name:	DOUBLE DIAMOND UTILITIES CO
Docket Number:	36220-R (WATER) The Cliffs

Preliminary - Subject To Change

Customer Meters	**No.:**	**Multiplier:**	**Conn. Equiv.**
Number of 5/8x3/4" connections:	215	1.00	215.00
Number of 3/4" connections:		1.50	0.00
Number of 1" connections:	12	2.50	30.00
Number of 1-1/2" connections:	1	5.00	5.00
Number of 2" connections:	15	8.00	120.00
Number of 3" connections:	1	15.00	15.00
Number of 4" connections:		25.00	0.00
Number of 6" connections:		50.00	0.00
Total =	**244.00**		**385.00**

Connection Equivalents

Utility/Customer Water Usage

Proposed Gallons Included In Minimum Bill =		0
Test Year Gallons Pumped (x 1,000) =		17,318
Test Year Gallons Billed (x 1,000) =		24,825

-43.3% = percent lost

Attachment BDD-16

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY *version:*

Utility Name: DOUBLE DIAMOND UTILITIES CO *0*

Docket Number: 36220-R (WATER) Retreat

Customer Meters	**No.:**	**Multiplier:**	**Conn. Equiv.**
Number of 5/8x3/4" connections:	56	1.00	56.00
Number of 3/4" connections:		1.50	0.00
Number of 1" connections:		2.50	0.00
Number of 1-1/2" connections:	3	5.00	15.00
Number of 2" connections:	1	8.00	8.00
Number of 3" connections:		15.00	0.00
Number of 4" connections:		25.00	0.00
Number of 6" connections:		50.00	0.00
Total =	**60.00**		**79.00** Connection Equivalents

Utility/Customer Water Usage

Proposed Gallons Included In Minimum Bill =		0
Test Year Gallons Pumped (x 1,000) =		
Test Year Gallons Billed (x 1,000) =		15,632

#DIV/0! = percent lost

Attachment BDD-17

W-4

COST TRENDS OF WATER UTILITY CONSTRUCTION

SOUTH CENTRAL REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
									1988		1989		1990		1991	
			1982	1983	1984	1985	1986	1987	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	224	229	233	233	233	232	231	234	237	238	237	237	235	229
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	217	225	230	229	229	231	230	234	235	240	244	246	242	239
9	Electric Pumping Equipment	311	260	271	277	282	284	299	330	303	309	336	340	349	357	350
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	217	225	230	229	229	231	230	234	235	240	244	246	242	239
16	Large Treatment Plant Equip.	320	242	257	260	263	266	272	273	277	282	289	291	295	296	297
17	Small Treatment Plant Equip.	320	258	274	277	281	284	289	291	296	301	307	309	313	311	311
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	210	182	184	181	184	196	215	221	223	209	221	232	232	259
24	Elevated Steel Tanks	330	244	197	200	198	207	219	252	261	267	267	269	281	281	286
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	227	240	239	246	241	246	247	254	260	264	266	267	269	269
28	Steel Mains	331	235	241	246	244	238	244	247	254	262	269	272	274	277	280
29	Concrete Cylinder Mains	331	222	230	232	242	246	247	255	257	262	266	270	272	275	281
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	238	247	247	250	246	249	251	259	267	270	269	270	272	273
35	Cast Iron Mains	331	227	248	249	256	249	254	255	264	271	276	276	277	278	279
36	Cement-Asbestos Mains	331	246	262	266	261	253	249	247	253	273	271	271	269	268	267
37	Steel Mains	331	250	242	238	237	238	242	247	255	259	261	260	261	264	266
38	PVC Mains	331	136	151	146	146	144	152	176	185	216	208	204	200	193	190
39	Services Installed	333	225	234	234	231	230	233	233	236	219	225	231	231	233	239
40	Meters	334	128	141	148	135	135	137	142	142	135	143	178	150	156	164
41	Meter Installations	334	222	238	244	243	247	251	255	257	255	258	261	262	270	274
42	Hydrants Installed	335	260	280	281	289	298	308	315	317	330	339	350	354	357	358
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		482	521	527	557	573	588	586	586	586	587	578	579	529	517
47	Clarifier Equipment-Installed		369	402	406	432	439	441	441	442	442	443	444	431	405	394
48	Filter Gallery Piping-Installed		216	232	230	231	229	234	234	240	245	249	249	249	250	251
49																
50																
51																
52																
53																
54																
55																
56																

Attachment BDD-18

Revenue Generated by Staff Proposed Rates		
The Cliffs		
RATES		**Original Prefile**
Base Rate		
5/8"	$ 19.19	$21.21
1"	47.98	53.03
1 1/2"	95.95	106.05
2"	153.52	169.68
3"	287.85	318.15
Volumetric		
0 - 3,000	2.60	
3,000 - 10,000	3.00	
10,000 - 15,000	5.07	
15,000 - 20,000	8.56	
20,000 +	14.45	
Total		
No. of Meters (Dec. 2007)		
5/8"	215	
1"	12	
1 1/2"	1	
2"	15	
3"	1	
Total	244	
Gallons Billed		
0 - 3,000	1,128,734	
3,000 - 10,000	3,740,968	
10,000 - 15,000	2,420,480	
15,000 - 20,000	1,837,877	
20,000 +	15,696,707	
Total	24,824,766	
REVENUE		
Base Rate		
5/8"	$ 49,510	$54,722
1"	6,908	7,636
1 1/2"	1,151	1,273
2"	27,634	30,542
3"	3,454	3,818
Total revenue generated by base rates	$ 88,658	$97,990
Volumetric Revenue		
0 - 3,000	2,935	
3,000 - 10,000	11,223	
10,000 - 15,000	12,272	
15,000 - 20,000	15,732	
20,000 +	226,817	
Total revenue generated by Volumetric Usage	268,979	
Reveue Generated by Proposed rates	$ 357,637	$366,969
Revenue Required	357,587	366,908
Over / (Under) Recovery	$ 50	$62

Attachment BDD-19

Revenue Generated by Existing Rates		
The Cliffs		
RATES		
Base Rate		
5/8"	$	30.00
1"		50.10
1 1/2"		99.90
2"		159.80
3"		320.00
Volumetric Charge per tier		
0 - 1,000		0.00
1,000 - 10,000		1.85
10,000 - 20,000		4.75
20,000 +		6.75
Total		
No. of Meters (Dec. 2007)		
5/8"		215
1"		12
1 1/2"		1
2"		15
3"		1
Total		244
Gallons Billed		
0 - 1,000		272,151
1,000 - 10,000		4,597,551
10,000 - 20,000		4,258,357
20,000 +		15,696,707
Total		24,824,766
REVENUE		
Base Rate		
5/8"	$	77,400
1"		7,214
1 1/2"		1,199
2"		28,764
3"		3,840
Total revenue generated by base rates	$	118,417
Volumetric Revenue		
0 - 1,000		0
1,000 - 10,000		8,505
10,000 - 20,000		20,227
20,000 +		105,953
Total revenue generated by Volumetric Usage		$134,685.44
Reveue Generated by Existing rates		$253,103

Attachment BDD-20

PROJECT NO. 35141

SETTING INTEREST RATES FOR CALENDAR YEAR 2009	§ §	PUBLIC UTILITY COMMISSION OF TEXAS

ORDER

The Public Utility Commission of Texas is required by section 183.003 of the Texas Utilities Code to set for calendar year 2009 the rate of interest on deposits held by utilities; and, pursuant to P.U.C. SUBST. R. 25.28(c), 25.28(d), 25.480(d), 25.480(e), 26.27(a)(3), and 26.27(b)(3), it is required to set for calendar year 2009 the rate of interest to be applied to overcharges and certain undercharges by a utility. The Commission therefore orders that:

1. The interest rate for calendar year 2009 on deposits held by utilities **SHALL** be 2.09 percent.
2. The interest rate for calendar year 2009 for overcharges and certain undercharges by a utility **SHALL** be 3.21 percent.

SIGNED AT AUSTIN, TEXAS the 3rd **day of December, 2008.**

PUBLIC UTILITY COMMISSION OF TEXAS

BARRY T. SMITHERMAN, CHAIRMAN

DONNA L. NELSON, COMMISSIONER

KENNETH W. ANDERSON, JR., COMMISSIONER