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AZ CORP COMMISSION
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Dennis E. Doelle, D.D.S
7223 E. Carefree Drive
P. O. Box 2506
Carefree, Arizona 85377

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF BLACK MOUNTAIN SEWER CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THERON.	) DOCKET NO: SW-02361A-08-0609	**NOTICE OF FILING EXHIBIT LIST**

Dennis E. Doelle D.D.S. hereby provides notice of filing an exhibit list for his Opening Statement.

Dated this 18th day of November, 2009

By Dennis E. Doelle
Dennis E. Doelle

Arizona Corporation Commission
DOCKETED

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DOCKET NO. SW-02361A-08-0609

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of the foregoing were filed this
18th day of November, 2009, with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Copies of the foregoing hand delivered
This 18th day of November, 2009 to:

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Phoenix, AZ 85004-1481

EXHIBIT LIST

1. ADEQ Engineering Bulletin #12 (Cover and Acknowledgements)
2. Affidavit of James A. Walters (February 1997)
3. Photo of Dental Chair Cuspidor
4. Photo of Closed Water Bottle System (from office of Dr. Dennis Doelle)
5. Correspondence from Arizona Department of Environmental Quality (August 1996)
6. Impact of Proposed Sewer Rates for the Dental Office of Dr. Dennis Doelle

engineering bulletin no. 12

Minimum Requirements for the Design and Installation of Septic Tank Systems and Alternative On-site Disposal Systems

June 1989

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

ACKNOWLEDGEMENTS

This bulletin was prepared primarily through the efforts of Messrs. Prabhat Bhargava and James Walters, environmental engineers on the staff of the Arizona Department of Environmental Quality. Other staff members who assisted in the development of this document were Jerry A. Breckenridge, Kathleen Carson, Debra L. Daniel, David Effert, James A. Maston, Charles E. Ohr, and Gary M. Ullinskey. The concepts, perspectives and approaches described in this document also reflect the views of a select advisory committee which was formed for the purpose of providing guidance and assistance to the Department in its effort to revise Engineering Bulletin No. 12, Guidelines for Installation of Septic Tank Systems. The advisory committee consisted of:

. Mike Block, Hydrologist, Pima Association of Governments
. Richard Broman, City of Apache Junction
. Bob Johnson, Pima County Planning and Development Services
. Fred May, Maricopa Association of Governments
. Richard McComb, City of El Mirage
. Dr. E. L. McFarlane, Keep Sedona Beautiful
. Dick Mettler, Home Builders Association
. Ken Ricker, Soil Specialist, Thomas-Hardig and Associates
. David Shephard, Sanitary Engineer
. Dale Smith, A Septic Tank Manufacturer
. Dr. Paul Trotta, Associate Professor, Northern Arizona University

We would also like to thank all the County Health Departments for their participation in development of this bulletin. Its preparation would have been impossible without their advice.

Finally, we would like to thank Dr. Ronald L. Miller and Lyndon Hammon for reviewing this document, Joe Drosendahl for providing graphics and Diana Kowalski and Cecilia Vela for their expertise in the typescript.

AFFIDAVIT OF JAMES A. WALTERS

STATE OF ARIZONA)
) ss.
County of Maricopa)

Before me, this 26 day of February, 1997, appeared James A. Walters, P.E., who after being duly sworn, deposed and said:

1. I am James A. Walters. I am a licensed professional engineer in the State of Arizona and am currently employed by the Arizona Department of Environmental Quality ("ADEQ") as a Hazardous Waste Permits Engineer. I have been employed by ADEQ continuously since 1987.

2. I earned a Bachelor's Degree in Chemical Engineering from ASU in 1968 and a Master's Degree in Chemical Engineering from ASU in 1969. I earned a Master's Degree in Environmental Engineering from USC in 1973.

3. While employed by ADEQ as an Environmental Engineer, I helped rewrite and revise Engineering Bulletin 12, at that time entitled "Guidelines for Installation of Septic Tank Systems," dated May, 1976 ("Bulletin No. 12, May 1976").

4. The revision of Bulletin No. 12, May 1976, that I participated in preparing was published by ADEQ in 1989 and entitled, "Engineering Bulletin No. 12, Minimum Requirements for the Design and Installation of Septic Tank Systems and Alternative On-Site Disposal Systems," dated June 1989 ("Bulletin No. 12, June 1989"). My name is shown in the page of Acknowledgments at Page "v" as one of the engineers primarily responsible for the rewrite which ADEQ issued as Bulletin No. 12, June 1989.

5. As part of my personal efforts in preparing Bulletin No. 12, June 1989, I helped prepare and review Table 1 on page 8, entitled, "Average Daily Sewage Flow" ("Table 1"), and am familiar with the meanings intended by the drafters of the words used in Table 1.

6. The purpose of Table 1 was to classify various businesses according to the anticipated maximum waste water and sewage flow quantities per day so that septic systems would be designed to handle those flows, called "hydraulic loadings." As one of the drafters, I participated in classifying the businesses shown on Table 1 and am familiar with the basis for those classifications.

7. Table 1 of Bulletin No. 12, June 1989, contained a reference to dental offices: "Dental office (chair)." In drafting Table 1, I understood the term "chair" to refer not to any kind of chair, but only to the patient chairs (like the ones that I had seen in my dentist's office). Those patient chairs had attached basins that provided a continuous stream of water

to wash the basin clean after the patient spit into the basin during the cleaning or repair of his or her teeth. The stream of water in the basin flowed continuously during the workday whether or not a patient was actually in the chair at the time. In drafting Table 1 of Bulletin No. 12, June 1989, my colleagues who participated in the drafting of Table 1 and I approved such a high hydraulic loading for the dental patient chairs (500 gallons per unit per day) because we intended that septic systems be designed with enough capacity to handle the continuous flows of waste water generated by the continuous flows of water in the basins attached to the patient chairs and the sinks and toilets. I believe that these basins are called "cuspidors," but I am not sure as I am not a health care professional. The hydraulic loading of 500 gallons per chair per day represented an effort on the part of the drafters of Bulletin No. 12 to quantify the probable hydraulic loading generated to the septic system by the continuous flows of water from these basins attached to the patient chairs in a dental office.

8. But for my understanding that the basins attached to the patent chairs in dental offices flowed continuously for the entire work day, I would not have approved the incorporation of the classification of dental offices with such a high hydraulic loading in the drafting of Table 1 of Bulletin No. 12, June 1989.

Further affiant saith naught.

James A. Walters

SWORN TO and subscribed before me this 26th day of February, 1997.

Notary Public

My Commission Expires:

3-18-99

OFFICIAL SEAL
KATHLEEN DuFRAIN
Notary Public - State of Arizona
MARICOPA COUNTY
My Comm. Expires March 18, 1999

Doc. # 10959

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Russell F. Rhoades, Director

August 30, 1996 DA96:036

Dr. Dennis E. Doelle
P.O. Box 2506
Carefree, AZ 85377

RE: Wastewater Discharge from Dentist's Chairs in Bulletin No. 12.; Estimating Wastewater Discharges from Dentist's Offices

Dear Dr. Doelle:

This letter is to answer your question regarding the average daily discharge of wastewater from a dentist's office based on the number of dentists chairs installed, and how to estimate the discharge from a dentist's office. I will also attempt to answer your question regarding the application of ADEQ's Bulletin No. 12.

First, the only logically and factually correct way to estimate the wastewater flow discharge rates from your dentist's office would be to total the gallons of water delivered to your business as shown on your water bills for the last 12 months and divide that number by 12. This will give you the total maximum average amount of water used per month and also give you the total *maximum* wastewater your office would discharge per month. The actual monthly average would be less if you are using some of you water for landscape irrigation.

In regards to the 500 gallons per day per dentist chair wastewater discharge you referenced in Engineering Bulletin No. 12, *Minimum Requirements for the Design and Installation of Septic Tanks Systems and Alternative On-Site Disposal Systems,* that figure can not be applied to your office discharge for several reasons. I will try to explain below.

The first and the most obvious reason is that Bulletin No. 12 only applies to those households and small businesses that are connected to an on-site wastewater system. Since you discharge to a sewer, Bulletin No. 12 does not apply to you. Applying Bulletin No. 12 to your situation would be a mis-application of the bulletin.

Secondly, some of the discharges and sizing calculations in Bulletin No. 12 have been based on artificially inflated figures and built in safety factors for wastewater discharge amounts in an effort to prevent the failure of on-site systems. When the on-site systems are over designed based on the higher discharge rates, there is less of a chance of the system and drain field failing due to hydraulic overloading. These sizing calculations are not based on average discharge rates, rather they are based on the higher-end producers of

wastewater with the goal of covering about 95% of the population. In other words when dealing with on-site systems, the goal of the regulatory agency developing design standards is to cover as much of the population as possible while balancing the costs of the systems and protecting public health and the environment. This is a valid and justifiable goal because if the discharge rates that appeared in these tables were based on average discharge rates then 50% of the systems would be under designed and a 50% failure rate would be expected. This could never be acceptable based on the potential threat to public health. So as you can see, the higher discharge rates that appear in these tables are developed for design purposes and can not be used for estimating discharge rates from a single facility.

The third reason is that Bulletin No. 12 is being re-written because of some existing technical problems within the document itself. One problem worth noting is that in some areas the increases in wastewater flows and sizing requirements are not realistic because they have become too conservative (too large a factor of safety) resulting in undue expense to the public. Therefore all of these calculations and tables are being re-checked and in some instances being down-sized to a more realistic number.

Whether or not the 500 gallons per day per chair of wastewater is accurate or not is not really relevant to your situation because Bulletin No. 12 does not apply to you. However, one of the reasons that I am re-writing Bulletin No. 12 is that there are problems with the implementation of the bulletin due to the conflicts and inconsistencies it has with local codes, such as the plumbing code. The on-site, private sewage disposal system appendix within the 1994 Plumbing Code ™ does not specifically address the discharge from dentists' offices. The only reference I could find is in Table 7-3. It assigns a fixture unit rate of 1 for dental units or cuspidors. This means that for these units it is assumed that they can discharge up to 7.5 gallons per minute. This is important in regards to sizing the waste piping so that it can handle all of the potential fixtures that could discharge at any one time. It really does not tell me what the total discharge per day is in gallons for a dentist's chair. The discharge amount depends on how long the fixture is left on during a 24-hour period. But if you do not have cuspidors in your dental office then this fixture unit size would not apply.

Another reason that there are problems with the discharge rates within the tables in Bulletin No. 12 is that the figures do not represent the water conservation or low flow devices. This "credit" is usually calculated separately and applied to the facility during the final plan review just prior to approving an on-site wastewater system design. But again I state that these tables would not apply to you since they are to be used when designing on-site wastewater systems.

Again, to determine your wastewater discharge you should assume you can not discharge any more in gallons than the amount of water that is delivered to the office. I suggest that you calculate your wastewater discharge amounts based on you water delivery amounts recorded in your water bills.

I hope I have answered your questions. I could not address the issue of fee rates since I do not understand what the relationship could be between the tables in Bulletin No. 12 and fee rate structures for facilities discharging to sewers. Please feel free to contact me at 602-207-4534 if you have any other questions or if I can be further service.

Sincerely,

Lauren G. Evans

Lauren G. Evans, Hydrologist IV
Water Quality Division

IMPACT OF PROPOSED SEWER RATES FOR DENTAL OFFICE OF DENNIS E. DOELLE, D. D. S.

ESTIMATED WATER FLOWS (FROM ADEQ ENGINEERING BULLETIN #12)

500 GAL/DAY x FOUR ACTIVE DENTAL CHAIRS

= 2000 GAL/DAY

X 21 WORKING DAYS/MONTH

= 42,000 GAL/MONTH

OR

X 30 CALENDAR DAYS/MONTH

= 60,000 GAL/MONTH

CALCULATION OF COMMERCIAL RATE

BASED ON 21 WORKING DAYS PER MONTH:

42,000 GAL/MONTH X 0.28957 PER GALLON = **$12,161.94 PER MONTH**

$12,161.94 X 12 MONTHS = **$145,943.28 PER YEAR**

BASED ON 30 CALENDAR DAYS PER MONTH:

60,000 GAL/MONTH X 0.28957 PER GALLON = **$17,374.20 PER MONTH**

$17,374.20 X 12 MONTHS = **$208,490.40 PER YEAR**