NPDES Permit No NM0029629

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Anthony Water and Sanitation District P.O. Box 1751 Anthony, New Mexico 88021

is authorized to discharge to receiving waters of the Rio Grande in Waterbody Segment Code No. 20.6.4.101 of the Rio Grande Basin, from a facility located at 1155 N. Fourth Street in Anthony, in Dona Ana County, New Mexico.

The discharge is located on that water at the following coordinates:

Outfall 001: Latitude 32° 01' 23" North and Longitude 106° 38' 54" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, Part III, and Part IV hereof.

This permit supersedes and replaces NPDES Permit No. NM0029629 issued December 12, 2012.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on Prepared by

William K. Honker, P.E.

Division Director

Ruben Alayon-Gonzalez
Environmental Engineer

Water Division (6WQ) Permitting Section (6WQ-PP)

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. Effluent Limits – 0.98 MGD Design Flow

Beginning the effective date of the permit and lasting until the expiration date of the permit, the permittee is authorized to discharge treated municipal wastewater to the Rio Grande in Waterbody Segment Code No. 20.6.4.101 of the Rio Grande Basin from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS							
EFFLUENT CHARACTERISTICS	lbs/day, unless noted		mg/L, unless noted (*1)			MONITORING REQUIREMENTS		
POLLUTANT	30-DAY AVG	DAILY MAX	7-DAY AVG	30-DAY AVG	DAILY MAX	7-DAY AVG	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Report MGD	N/A	N/A	N/A	Daily	Totalizing Meter
Total Suspended Solids	245	N/A	368	30	N/A	45	Three/Month	3-Hour Composite
Total Suspended Solids, % removal, minimum	≥ 85% (*2)	N/A	N/A	N/A	N/A	N/A	Once/Month	Calculation (*2)
Biochemical Oxygen Demand, 5-day	245	N/A	367.8	30	N/A	45	Three/Month	3-Hour Composite
Biochemical Oxygen Demand, 5-day, % removal, minimum	≥ 85% (*2)	N/A	N/A	N/A	N/A	N/A	Once/Month	Calculation (*2)
Total Residual Chlorine	N/A	N/A	N/A	N/A	19 μg/l	N/A	Five/Week	Instantaneous Grab (*3)
E. coli Bacteria	4.30 (*4)	N/A	N/A	126 (*5)	410 (*5)	N/A	Three/Month	Grab
Boron, dissolved	N/A	N/A	N/A	Report	N/A	N/A	Once/Month	Grab

	DISCHARGE LIMITATION			
EFFLUENT	Standard Units			
CHARACTERISTICS			MONITORING REG	QUIREMENTS
			MEASUREMENT	
POLLUTANT	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
pH	6.6	9.0	Five/week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION	MONITORING REQUIREMENTS		
WHOLE EFFLUENT TOXICITY TESTING (7-Day Chronic Static Renewal/NOEC) (*6)		MEASUREMENT FREQUENCY	SAMPLE TYPE	
Ceriodaphnia dubia	Report	Once/12 Months(*7)	24-Hr Composite	
Pimephales promelas	Report	Once/12 Months(*7)	24-Hr Composite	

Footnotes:

- *1 See Part II. Section A. Minimum Quantification Level (MQL) of permit.
- *2 Percent removal is calculated using the following equation: (average monthly influent concentration average monthly effluent concentration) ÷ average monthly influent concentration.
- *3 The effluent limitation for TRC is the instantaneous maximum grab sample taken during periods of chlorine use and cannot be averaged for reporting purposes. Instantaneous maximum is defined in 40 CFR Part 136 as being measured within 15 minutes of sampling.
- *4 Billion (1.0 x 10°) cfu/day. The loading limit shall be calculated as follows: [Flow in MGD x cfu/100 mL in effluent x 3.79 x 10°] /1.0 x 10°
- *5 Colony forming units (cfu) per 100 ml or Most Probable Number (MPN)
- *6 Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
- *7 The test shall take place between November 1 and April 30. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

No compliance schedule is proposed.

C. MONITORING AND E-REPORTING (MINOR DISCHARGERS)

Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at https://netdmr.epa.gov. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water Enforcement Branch, New Mexico State Coordinator (6EN-WC), (214) 665-6468. If paper reporting is granted temporarily, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and copies to NMED as required (See Part III.D.IV of the permit). Reports shall be submitted quarterly.

- 1. Reporting periods shall end on the last day of the months March, June, September, and December.
- 2. The permittee is required to submit regular monthly reports as described above postmarked no later than the 28th day of the month following each reporting period.
- 3. If any 7-day average or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.
- 4. Any 30-day average, 7-day average, or daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.
- 5. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for five-day Biochemical Oxygen Demand (BOD₅) or for five-day Carbonaceous Biochemical

Oxygen Demand (CBOD₅), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD₅ or CBOD₅ values, as applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

D. OVERFLOW REPORTING

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665-6595, <u>and NMED Surface Water Quality Bureau at (505) 827-0187</u>, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows that endanger health or the environment shall be provided to EPA and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

E. POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute a program within 18 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

- a. The influent loadings, flow and design capacity;
- b. The effluent quality and plant performance;
- c. The age and expected life of the wastewater treatment facility's equipment;
- d. Bypasses and overflows of the tributary sewerage system and treatment works;
- e. New developments at the facility;
- f. Operator certification and training plans and status;
- g. The financial status of the facility;
- h. Preventative maintenance programs and equipment conditions and;
- i. An overall evaluation of conditions at the facility.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

EPA-approved test procedures (methods) for the analysis and quantification of pollutants or pollutant parameters, including for the purposes of compliance monitoring/DMR reporting, permit renewal applications, or any other reporting that may be required as a condition of this permit, shall be sufficiently sensitive. A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit (see table below), then the method has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or 0, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample-specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample-specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit. The following pollutants may not have EPA approved methods with a published ML at or below the effluent limit, if specified:

POLLUTANT	CAS Number	STORET Code	
Total Residual Chlorine	7782-50-5	50060	
Cadmium	7440-43-9	01027	
Silver	7440-22-4	01077	
Thallium	7440-28-0	01059	
Cyanide	57-12-5	78248	
Dioxin (2,3,7,8-TCDD)	1764-01-6	34675	
4, 6-Dinitro-0-Cresol	534-52-1	34657	
Pentachlorophenol	87-86-5	39032	
Benzidine	92-87-5	39120	
Chrysene	218-01-9	34320	
Hexachlorobenzene	118-74-1	39700	
N-Nitrosodimethylamine	62-75-9	34438	
Aldrin	309-00-2	39330	
Chlordane	57-74-9	39350	
Dieldrin	60-57-1	39380	
Heptachlor	76-44-8	39410	
Heptachlor epoxide	1024-57-3	39420	
Toxaphene	8001-35-2	39400	

Unless otherwise indicated in this permit, if the EPA Region 6 MQL for a pollutant or pollutant parameter is sufficiently sensitive (as defined above) and the analytical test result is less than the MQL, then a value of zero (0) may be used for reporting purposes on DMRs. Furthermore, if the EPA Region 6 MQL for a pollutant or parameter is not sufficiently sensitive, but the analytical test result is less than the published ML from a sufficiently sensitive method, then a value of zero (0) may be used for reporting purposes on DMRs.

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

Total Residual Chlorine *E. coli* bacteria

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

- 1. The following pollutants may not be introduced into the treatment facility:
- (a) Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

- (b) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
- (c) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
- (d) Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
- (e) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves the alternate temperature limit;
- (f) Petroleum oil, non biodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through;
- (g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
- (h) Any trucked or hauled pollutants, except at discharge points designated by the POTW.
- 2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.
 - 3. The permittee shall provide adequate notice of the following:
- (a) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and
- (b) Any substantial change in the volume or character of pollutants being introduced into the treatment works.
- (c) Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of such change in the quality or quantity of effluent to be discharged from the publicly owned treatment works.

E. WHOLE EFFLUENT TOXICITY TESTING (7 DAY CHRONIC NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S): 001

REPORTED AS FINAL OUTFALL: 001

CRITICAL DILUTION (%): 59%

EFFLUENT DILUTION SERIES (%): 25%, 33% 44%, 59%, and 79%

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA 821 R 02 013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA 821 R 02 013, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test

completion to a test species at or below the critical dilution.

- c. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, and the EPA WET Coordinator (6WQ-PO) in writing, within 5 business days of notification of the test failure. NMED and EPA will review the test results and determine the appropriate action necessary, if any.
- d. This permit may be reopened to require WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 80%.
- ii. The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods.
- iv. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- v. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- vi. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and

survival endpoints of the Fathead minnow test.

- vii. a PMSD range of 13 47 for *Ceriodaphnia dubia* reproduction;
- viii. a PMSD range of 12 30 for Fathead minnow growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the *Ceriodaphnia dubia* survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.

For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
- (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

- (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
- (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
- (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);
- (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
- (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.
 - d. Samples and Composites
- i. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect a second and third composite sample for use during the 24-hour renewal of each dilution concentration for each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling

period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-013, or the most current publication, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported during each reporting period specified in PART I of this permit.
- c. The permittee shall report the following results of each valid toxicity test on the DMR for that reporting period in accordance with PART I, Section C of this permit, as follows below.
 - i. <u>Pimephales promelas</u> (Fathead minnow)
 - (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP6C.
 - (B) Report the NOEC value for survival, Parameter No. TOP6C.
 - (C) Report the LOEC value for survival, Parameter No. TXP6C
 - (D) Report the NOEC value for growth, Parameter No. TPP6C
 - (E) Report the LOEC value for growth, Parameter No. TYP6C
 - (F) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a '1'; otherwise,

enter a '0' for Parameter No. TGP6C

(G) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C

- ii. Ceriodaphnia dubia
 - (A) If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B
 - (B) Report the NOEC value for survival, Parameter No.TOP3B
 - (C) Report the LOEC value for survival, Parameter No.TXP3B
 - (D) Report the NOEC value for reproduction, Parameter No. TPP3B
 - (E) Report the LOEC value for reproduction, Parameter No. TYP3B
 - (F) If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B
 - (G) Report the higher (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B
- d. If retests are required by NMED and EPA, enter the following codes:
- i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for the lethal or sublethal endpoint is less than the critical dilution; otherwise, enter a "0."
- ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for the lethal or sublethal endpoint is less than the critical dilution; otherwise, enter a "0"