

US EPA ARCHIVE DOCUMENT

Permit No. AZ0024627 / City of Mesa Northwest Water Reclamation Plant (NWWRP)

Applicant: City of Mesa
P.O. Box 1466
Mesa, AZ 85211-1466

Permit Action: Final Permit Decision and Response To Comments

Date: June 13, 2013

The City of Mesa (The City) and the Arizona Department of Environmental Quality (ADEQ) submitted comments on the proposed permit during the public comment period. The following is a description of the comments received and USEPA Region 9's (EPA or Region 9) response.

The Comments are in *Italics* and Region 9's Responses in **Bold**

CITY OF MESA'S COMMENTS:

The City requests that NPDES Permit # AZ0024627 be revised to correspond to the testing set forth in # AZ0024031, except as otherwise designated.... In particular, characterization of the applicable reach of the Salt as effluent dependent is clearly erroneous under the facts and the law, arbitrary, capricious, and an abuse of discretion.

NPDES Permit # AZ0024627 is being issued by EPA because the outfalls covered by the permit are located on Salt River Pima Maricopa Indian Community (SRPMIC) tribal land. As such Region 9 has included permit limits and monitoring requirements that are consistent with the Arizona Department of Environmental Quality's (ADEQ) permit # AZ0024031. However, Region 9 is not required to set forth requirements that correspond exactly with a State issued permit. Additionally, under A.A.C. Section R18-11-113 D. The Director shall use the water quality standards that apply to an effluent-dependent water to derive water quality-based effluent limits for a point source discharge of wastewater to an ephemeral water. Under the current permit, the City of Mesa is discharging wastewater from a point source to a reach of the Salt classified as ephemeral. However according to A.A.C Section R18-11-113 D. application of effluent dependant standards are appropriate and lawful.

As there is no reasonable potential to exceed the appropriate limit, the City requests that the Permit be revised and Di(2-ethylhexyl Phthalate) be listed in the table for Effluent Characterization with Annual Monitoring.

The designated uses for the receiving water as indicated above are Aquatic & Wildlife effluent dependent (A&Wedw) and Partial-body Contact (PBC). Therefore the A&Wedw standard of 360ug/L is the lowest applicable standard, and hence, based on the additional information submitted, there is no reasonable potential to exceed the limit and therefore this parameter will be removed from Table 1. and instead be listed in the table for Effluent Characterization with Annual Monitoring in Table 3.e.

As there is no A&We or PBC surface water limit for Ammonia, therefore the City requests that the Ammonia limit from Table 1. be removed. Additionally, Temperature is required to analyze the surface water limit for Ammonia, and since there is no limit for Ammonia, the monitoring limit for Temperature should also be deleted from Table 1.

The appropriate designated use for the receiving water is A&Wedw and PBC. Ammonia is a newly required standard under A&Wedw and it is not clear if there is reasonable potential to exceed this standard. Therefore ammonia and temperature (as the ammonia standard is temperature dependent) are removed as limits from Table 1. and are instead now required to be monitored under Table 2 to assess if the discharge exceeds action levels. If this monitoring establishes that there is a reasonable potential to exceed the action level, then pursuant to the re-opener clause in the permit, the permit may be modified to establish appropriate limits and monitoring requirements for ammonia and temperature.

The City submits data to demonstrate that there is no reasonable potential to exceed the A&We or PBC limit and the City requests that Copper instead be listed in the table for Effluent Characterization with quarterly monitoring

As explained above, pursuant to A.A.C.11-18-113 D. the appropriate limit to be applied is not the A&We but rather the A&Wedw standard. It is not definitive from the data submitted if there is reasonable potential to exceed this standard. Therefore copper and hardness limits (As the copper standard is hardness dependent) are removed from Table 1. and are instead now required to be monitored under Table 2. to assess if the discharge exceeds action levels. If this monitoring establishes that there is a reasonable potential to exceed the action level, then pursuant to the re-opener clause in the permit, the permit may be modified to establish appropriate limits and monitoring requirements for copper and hardness.

The City submits data on Whole Effluent Toxicity (WET) Testing to demonstrate 10 or more sampling events without detection of toxicity for C. Dubia and P. Promelas and requests a reduction in testing to Semi Annual monitoring for these two species.

Based on the information submitted by the City, Region 9 has modified the final permit to reduce testing from Quarterly to Semi- Annual for these two species.

There is no A&We surface water limit for Total Residual Chlorine (TRC), therefore the City requests that the limit established in Table 1. be removed and a limit of 4000ug/L for PBC be set.

Under Section R18-11-113 D. Arizona requires that water quality standards that apply to and effluent dependent water be used to derive water quality-based effluents for a point source discharge of wastewater to an ephemeral water. Therefore the A&Wedw standard for TRC applies. This standard is 11 ug/L chronic and 19 ug/L acute. Therefore, these limits have been included in Table 1. Footnote 8 in Table 1. indicates that sampling for TRC is only required when chlorine or bromine is used for disinfection. The monitoring frequency has been reduced to once per week.

The City has demonstrated the ability to meet assessment levels and requests the removal of Table 2 from the NPDES Permit.

Region 9 has reviewed the data submitted including the letter dated March 1, 2011 from ADEQ allowing the City to discontinue monitoring for similar parameters as found in Table 2 till the last year of the ADEQ Permit term. Region 9 therefore is removing the existing Table 2.a. and 2.b. from the draft permit and now only requires assessment level monitoring for ammonia, temperature, copper, and hardness. If future monitoring pursuant to the City's ADEQ issued permit indicates that other parameters do not meet assessment levels, this permit may be re-opened and limits to monitor such parameters may be established.

There is no A&We or PBC surface water quality limit for Hydrogen Sulfide. The City requests the removal of Hydrogen Sulfide from Table 2.

As indicated above all the assessment level monitoring found in Table 2.a. and 2.b. of the proposed permit have been removed. The new Table 2. only requires assessment level monitoring for ammonia, temperature, copper, and hardness. If future monitoring pursuant to the City's ADEQ issued permit indicates that other parameters do not meet assessment levels, this permit may be re-opened and limits to monitor such parameters may be established.

The City requests deletion of Table 2.b. as it does not exist in AZPDES Permit # 0024031 and the parameters are now part of effluent characterization with quarterly monitoring.

Region 9 has removed Table 2.b. and Table 2.a. as found in the proposed permit and is now replaced with a new Table 2. that requires assessment level monitoring for ammonia, temperature, copper, and hardness.

The City submits WET Testing data demonstrating no detection of Toxicity for R. Subcapitata, and therefore requests a reduction in testing frequency to annual monitoring.

Region 9 has reduced toxicity testing for R. Subcapitata to annual monitoring.

The City requests deletion of Part V. Special Condition A in its entirety. There are no similar conditions regarding Tempe Town Lake included in the ADEQ issued Permit # AZ0024031. Additionally, the City simply has no control over the numerous and various conditions affecting downstream reaches of the Salt River, including but not limited to substantial exempt water flows and the intentional dam management practices of the City of Tempe. The discharge from NWWRP meets all requirements for the receiving segment of the Salt River. The Part V. A. Special Conditions ignore the intervening and superseding acts of third parties in downstream reaches which are the direct and sole proximate and actual cause of the water quality of any impounded waters immediately upstream of Tempe Town Lake as well as the Lake itself. The City takes particular exception to the restriction in Part V. A. 3. which provides that discharge at Outfall 005 is authorized only as long as flow from Outfall 005 does not become confluent with flow reaching the footing of the dam. Discharges at Outfall 005 are approximately 10 miles east of the NWWRP and 11 miles east of Tempe Town Lake. The dilution of effluent flow in such a scenario is so significant that there is simply no plausible factual basis supporting the technical judgment that discharges at Outfall 005 would result in measureable water quality impacts or degradation in a reach so far downstream, whether such discharges are for storage at the Granite Reef Underground Storage Project or otherwise. While Mesa intends to put as much of the reclaimed water from the NWWRP to beneficial reuse as is practicable, nevertheless it is anticipated that occasional discharges to the Salt River will be necessary.

After reviewing the data submitted by the City of Mesa including information regarding the flows into the Salt River at various locations, as well as the current ADEQ issued Permit # AZ0024031, Region 9 concurs with the City of Mesa and therefore is removing the Special Condition A. regarding restrictions on discharge in reference to Tempe Town Lake.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY'S COMMENTS:

Di (2-ethylhexyl) phthalate has no reasonable potential (RP) to exceed the applicable water quality standards (WQS) and therefore should have no limits. The designated uses for the receiving water are A&Wedw and PBC. The lowest applicable standard to the EPA permitted

discharge is the A&Wedw standard of 360 ug/L not 3 ug/L as indicated in the proposed draft. At a limit of 360 ug/L there is no RP for this parameter and not limits are required.

Region 9 has removed Di (2-ethylhexyl) phthalate from Table 1. which provided Effluent Limits and has instead included the chemical as part of Table 3.e. Expanded Effluent Testing with annual monitoring.

Because Ammonia has a newly applied standard for the A&Wedw designated use, ADEQ recommends that ammonia be given “action levels” in Table 2.a. instead of limits, unless the available data clearly indicates RP.

Region 9 has removed Ammonia from Table 1 and included it in Table 2. of the final permit.

Temperature is included in Table 1. because the Ammonia standard is dependent on temperature and pH. Therefore, the required monitoring frequency for temperature should be the same as that for Ammonia.

Region 9 has removed Temperature monitoring from Table 1. and included it in Table 2. in the permit at the same monitoring frequency as that for ammonia.

The word “limits” should be removed from the columns heading as these are “action levels”

Region 9 has amended the columns headings to “action levels”

The action levels of 0.12 ug/L and 0.37 ug/L shown for mercury in Table 2.a. are not correct. The applicable A&Wedw standard for mercury is 0.01 ug/L and the limits should be within the same range of values.

Region 9 has removed Table 2.a. found in the proposed permit because the City submitted data including a letter dated March 1, 2011 from ADEQ allowing the City to discontinue monitoring for parameters including mercury, among others, as found in Table 2.a. till the last year of the ADEQ Permit term. If future monitoring pursuant to the City’s ADEQ issued permit indicates that other parameters do not meet assessment levels, this permit may be re-opened and limits to monitor such parameters may be established.

Arizona no longer has WQS for sulfide. It was replaced by a WQS for hydrogen sulfide in 2009. However, ADEQ uses sulfide as an indicator parameter for hydrogen sulfide.

Region 9 has noted this. However as the parameters found in Table 2.a. and 2.b. of the proposed permit are no longer required to be monitored, this comment is no longer relevant in the context of the final permit.

ADEQ typically requires testing for hazardous waste determination. The proposed EPA permit does not include any such requirement.

Nationwide, no biosolids from municipal wastewater treatment plants have failed the federal hazardous waste test (TCLP test) in 40 CFR 261 in the last 30 years. Therefore EPA does not consider it necessary for a municipal POTW such as the City of Mesa Northwest WRP to run this test.

Please change the phone number of the ADEQ Biosolids Coordinator to the correct one provided.

Region 9 corrected the contact number.