CITY OF TUCSON

TUCSON WATER DEPARTMENT

October 20, 2011

Ms. Sandra Fabritz-Whitney, Director
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, Arizona 85012

Subject: Request for Director's Modification of Permit No. 71-545944.0001

Dear Ms. Fabritz-Whitney:

The City of Tucson, Tucson Water Department and the Bureau of Reclamation are co-permittees on the above referenced managed underground storage facility, permitted to store up to 9,307 acre feet of effluent per year in the Santa Cruz River channel. On July 26, 2011, permittees met with Arizona Department of Water Resources (ADWR) Recharge Program Manager Doug Dunham and staff to discuss dewatering permits issued or to be issued by the Department and issues arising from discharges of the dewatered groundwater into our managed recharge facility.

Due to these unanticipated discharges, several existing permit conditions have been rendered ineffective. In order to accurately account for the volume of effluent recharged and comply with pertinent recharge statutes, we are requesting a Director's modification in accordance with A.R.S. § 45-814.01(G) and permit condition 6.b. The proposed changes to permit language listed below (underlined text) effectively address two main aspects of the permit with regards to current and potential future discharges into or diversions out of the facility: 1) provide updated requirements for data acquisition and reporting and 2) revise descriptions for components of the recharge calculation formula.

Santa Cruz Managed USF: Permit No. 71-545944.0001 – Permit Condition:

2.b. Pursuant to A.R.S. § 45-875.01 the permittee shall submit an **annual** data report to the ADWR no later than March 31 following the end of each completed annual reporting period. <u>The permittees may amend the annual report to account for non-project discharges into the facility within 60 days of their receipt of accurate, 3rd party, annual discharge reporting data from ADWR and/or Arizona Department of Environmental Quality (ADEQ).</u> The first reporting period shall be from the issuance date of this permit through December 31, 1999. Subsequent reporting periods shall be January 1 through December 31. The fourth quarter data report may be combined with the annual data report.

The permittee shall send three (3) copies of all annual data reports to the Records Management Unit, Arizona Department of Water Resources, 500 North Third Street, Phoenix, Arizona 85004.

The **annual** reports shall include a descriptive summary and analysis of the facility utilizing a narrative description, hydrographs, tables and maps. A description of the operation of the facility, total volume of water stored at the facility since the project inception, and any potential adverse impacts to surrounding land and water users shall be provided.

3.b. Water Quantity:

The report shall contain the water quantity data for the recharge facility compiled and presented in monthly summaries indicating the month, daily volume of water discharged to the managed recharge facility in acre-feet at the measuring points listed in **Table 2** and the daily volume of water measured at the USGS Cortaro Stream Gage listed in **Table 2**. The information shall be presented in monthly summaries indicating at a minimum, but not limited to, discharge point identification, the month, and the daily volume of water discharged in gallons and acre-feet. Information documenting non-project discharges into the facility shall be obtained from ADWR and/or ADEQ annual reports filed by 3rd parties.

3.c.iii. The permittee shall document and report any storm flows that occur at the facility. Storm flows are defined as periods when the daily discharge measured at the USGS Cortaro Stream Gage listed in **Table 2** exceeds the sum of daily discharges measured at the Roger Road Wastewater Treatment Facility and the Ina Road Water Pollution Control Facility at the flumes listed in **Table 2** and the daily volume of all non-project point-source discharge into the facility. The storm flow information shall include the date(s) of the storm flow, duration of the flows, and the volume of water discharged into the river at the Roger Road Wastewater Treatment Facility and the Ina Road Water Pollution Control Facility, and the discharge at the USGS Cortaro Stream Gage during the storm flow event.

4.f. Recharge at the facility shall be calculated using the following equation based on the parameters listed in **Table 2**:

$$\text{Recharge} = 73.2\% \, [Q_{RRWTF} - (Q_{Cortaro} - Q_{IWPCF})] - 580 \text{ AF}$$

Q_{RRWTF} = The daily volume of effluent discharged to the Santa Cruz River from the Roger Road Plant.

$Q_{Cortaro=}$ The daily volume of flow past Cortaro Road, adjusted by subtracting the daily volume of non-project point-source discharge into the facility.

$Q_{IWPCF=}$ The daily volume of effluent discharged to the Santa Cruz River from the Ina Road Plant.

4.h. All water removed from the facility via authorized diversions shall be deducted on an annual basis and shall be documented in the annual report. The documentation shall include the legal authorization for the diversion and the amount of water diverted.

4.i. Information documenting non-project discharges into the facility shall be obtained from ADWR and/or ADEQ annual reports filed by 3rd parties. Because collection of this information is not performed directly by the permittees, a reasonable best effort to account for this information is expected. Documentation shall include a citation of the report source, the date filed, name of reportee, and location of discharge outfall. If discharge volume is not reported as daily volumes, permittees shall make a reasonable effort to apportion the non-project discharges into the facility on a daily basis.

6.d. No waters other than those waters specified under the permit limitations are authorized for recharge at this facility. Other waters entering the facility may be carried through the facility in the natural channel, to the extent possible, in accordance with A.R.S. § 45-173(A).

Table 2: Facility Monitoring. A proposed change to Table 2 is included as an attachment.

We appreciate your attention to this matter and this opportunity to work with Department staff in developing modified permit language to address these issues. Feel free to contact Asia Philbin at 520-837-2240 regarding this matter.

Respectfully yours,

Sandy Elder

Sandy Elder
Interim Director

Attachment: Table 2

cc: Christopher Avery, City of Tucson Attorney's Office
Randy N. Chandler, Area Manager, U.S. Bureau of Reclamation, Phoenix Office
Deborah Tosline, Hydrologist, U.S. Bureau of Reclamation, Tucson Field Office
Gilbert Davidson, Town Manager, Town of Marana
Billie Deen, Secretary, Avra Valley Irrigation and Drainage District
Sidney Smith, Manager, Cortaro-Marana Irrigation District

Table 1
Water Level Monitoring
(Monitor Wells)

Monitor Point	ADWR Registration Number	Location	Well Depth (feet bls)	Screened Interval (feet bls)	Measuring Device	Monitoring/ Recording Frequency*	Reporting Frequency 1st 2 years	Reporting Frequency next 18years	Alert Water Level (feet bls)
A-021A	55-620296	D (13-12) 12aba	180	60-178	sounder	quarterly	quarterly	annually	20
WR-200A	55-530631	D (13-13) 20dab	200	115-200	sounder	quarterly	quarterly	annually	20
WR-202A	55-529266	D (13-13) 21cbb	200	130-200	sounder	quarterly	quarterly	annually	20
WR-204A	55-529264	D (13-13) 20abc	200	130-200	sounder	quarterly	quarterly	annually	20

Table 2
Facility Monitoring

Monitor Point	Measuring Device	Parameter	Location	Monitoring Frequency[1]	Reporting Frequency 1st 2 years	Reporting Frequency next 18 years
RPF-1	Parshall Flume with Totalizer	Discharge to Santa Cruz river from Roger Road Wastewater Treatment Facility (Q_{RRWTF})	D (13-13) 21cbc	daily	quarterly[2]	annually[2]
RPF-2	Parshall Flume with Totalizer	Discharge to Santa Cruz river from Roger Road Wastewater Treatment Facility (Q_{RRWTF})	D (13-13) 21cbc	daily	quarterly[2]	annually[2]
IPF-1	Parshall Flume with Totalizer	Discharge to Santa Cruz river from the Ina Road Water Pollution Control Facility (Q_{IRWPCF})	D (13-12) 1baa	daily	quarterly	annually
CSG	USGS Stream Gage	Discharge of the Santa Cruz River at the Cortaro Stream Gage , adjusted by subtracting the daily volume of non-project point-source discharge into the facility ($Q_{Cortaro}$)	D (12-12) 35bbb	daily	quarterly	annually

1 Daily data shall be compiled for each month and submitted to ADWR according to the reporting frequency listed above.

2 The RPF-1 and RPF-2 discharge measurements may be reported as a combined daily discharge volume from Roger Road Wastewater Treatment Facility.