

June 27, 2013

## **MEMORANDUM**

TO: Greg Eager  
Engineering Manager, Idaho Falls Regional Office

FROM: Charlie Mazzone  
Idaho Falls Regional Office

SUBJECT: Staff Analysis for Draft Wastewater Reuse Permit M-029-03, City of Arco

### **EXECUTIVE SUMMARY**

This permit renewal is substantially equal to the existing permit. Changes that were incorporated consist of DEQ requirements which have changed from the previous permit:

- A Quality Assurance Project Plan, signage in the Spanish language, a pre-application workshop, and reformatting to the current reuse permit template.

Positive factors involved with the facility include:

- Close correlation between nitrogen and phosphorus applied and nitrogen and phosphorus removed, showing nutrient removal rate efficiency.
- Hydraulic and constituent overloading did not occur during the last permit cycle.
- Operations are simplified because the facility uses no supplemental irrigation water.
- Operations are expected to remain the same during the next permit cycle.
- Arco is not expected to have significant growth.

Negative factors involved with the facility include:

- The facility has been negligent in monitoring and reporting through the years, but the operators have made improvements over the last two years in reporting and monitoring, largely due to improved DEQ/source communications and DEQ outreach to city personnel.

Based on the above factors, this permit renewal recommends the City of Arco receive a 10 year permit.

### **1. PURPOSE**

The purpose of this memorandum is to satisfy the requirements of the *Recycled Water Rules*, IDAPA 58.01.17.400.05, for issuing wastewater reuse permits. This memorandum addresses the draft reuse permit number M-029-03, for the City of Arco wastewater treatment and reuse system. The city treatment and reuse system is currently permitted under the terms of permit number LA-000029-02.

### **2. SUMMARY OF EVENTS**

The Department of Environmental Quality (DEQ) issued Permit No. LA-000029-02 to Arco on July 17, 2008. The permit is for continued operation of the wastewater treatment and reuse system serving the city of Arco. The purpose of the draft permit is to renew permit number LA-000029-02, which expires July 17, 2013.

A permit renewal application from Arco was received on February 11, 2013, and largely serves as the basis for the terms and conditions contained in the draft permit. As required by the *Recycled Water Rules*, the draft permit will be presented for a public comment period. After the comment period has closed, DEQ will provide written responses to all relevant comments and prepare a final permit for the facility.

### 3. PROCESS and SITE DESCRIPTIONS

The site and treatment processes discussed in the staff analysis for Arco's previous permit have not changed since that time. For complete discussions regarding these items, refer to the staff analysis dated July 2008 for the draft version permit number LA-000029-02.

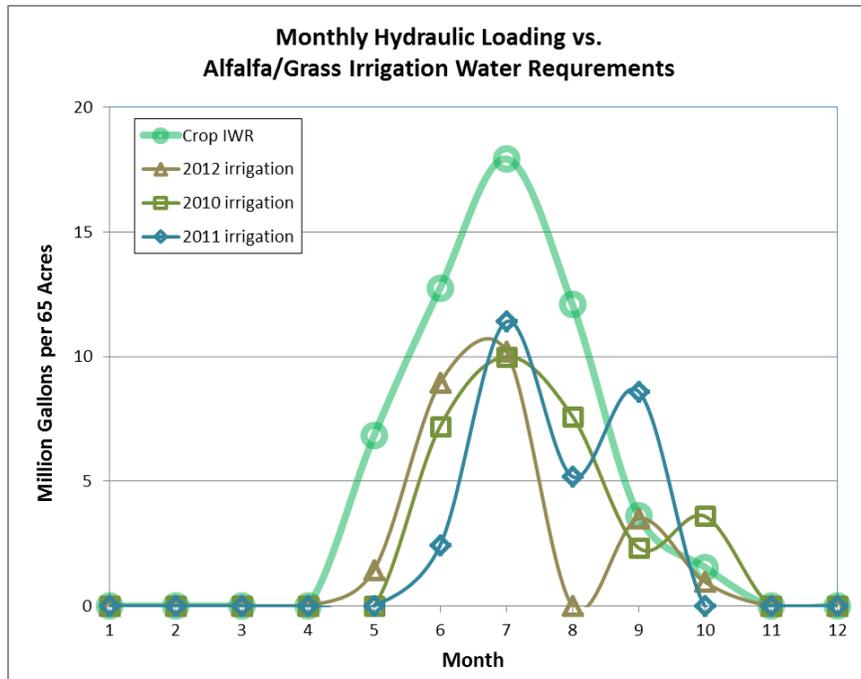
The Arco wastewater treatment facility provides primary and secondary lagoon treatment of wastewater, wastewater storage, and wastewater disinfection. After disinfection, wastewater is land applied to 65.5 acres of the facility's 116 acres.

The wastewater treatment process incorporates four cells (lagoons): Lagoon A is continuously aerated, Lagoons B and C are facultative ponds, and Lagoon D serves as a storage pond. Wastewater influent can flow in series through Lagoons A, B and C, or flow parallel to Lagoons A and B; any of the lagoons can be bypassed. Typically, series flow through treatment lagoons A, B and C is stored in Lagoon D, then rotoscreened, tablet chlorinated, then used for irrigation.

Wastewater is chlorine disinfected to 23 organisms per 100 mL (maximum) Class C effluent (IDAPA 58.01.17.601.03 - *Municipal Recycled Water: Classification, Treatment, Use* before land application.

### 4. PERMITTING DISCUSSION

The following sections outline changes made to the terms of the draft renewal permit, based on changes requested by the permittee, evaluations of past performance with previous permit requirements, and/or updates required by changes to the *Recycled Water Rules* or any other applicable regulatory standards. Terms and conditions that are unchanged from the previous permit and remain applicable to the facility are not addressed in this document.



#### 4.1 Compliance Schedule for Required Activities – Section 3

##### CA-029-01 *Quality Assurance Project Plan (QAPP)*

Development of a QAPP is recommended to provide assurance that valid data are collected, analyzed, and reported to the DEQ.

##### CA-029-02 *Plan of Operation*

The facility updated the Plan of Operation during the last permit cycle, but this compliance activity assures updating is an ongoing process.

##### CA-029-03 *Seepage Testing*

The facility is required to seepage test by October 2015 in order to comply with the *IDAPA 58.01.16 Wastewater Rules, Section 493 - Facility and Design Standards for Municipal Wastewater Treatment or Disposal Facilities: Wastewater Lagoons, Subsection 02 - Seepage Testing Requirements*.

Results of previous seepage tests are shown below:

Lagoon	Test Date	Result (in./d)	Required (in./d)
LG-029-01; Lagoon A	August 2003; November 2005	0.15; 0.013	0.25; 0.125 (pond was newly lined).
LG-029-02 & -03; Lagoons B & C combined	August 2003; November 2005	0.17; 0.015	0.25; 0.125 (ponds were newly lined).
LG-029-04; Lagoon D	June 2005	0.030	0.125

##### CA-029-04 *Well Location Acceptability Analysis*

This compliance activity was extended from the last permit cycle allow for consideration of a new well which might be utilized for supplemental irrigation water.

##### CA-029-05 *Flow Meter Calibration*

This activity fulfills the DEQ requirement for flow meter calibration every five years. The last calibration was conducted in 2009.

##### CA-029-06 *Posting*

This activity updates the signage at the facility to the DEQ new requirement that Spanish language be included, according to *IDAPA 58.01.17 Recycled Water Rules, Section 603.03*.

##### CA-029-07 *Pre-Application Workshop*

The pre-application workshop is a DEQ requirement to streamline the permitting process.

##### CA-029-08 *Renewal Permit Application*

This activity requires the facility to apply for a renewed permit six months prior to permit expiration.

#### 4.2 Permit Limits and Conditions – Section 4

There have been no new permit limits or conditions as part of this permit renewal.

#### **4.3 Monitoring and Reporting – Sections 5 & 6**

Generally, the facility is required to monitor the volumes of wastewater applied on the land application site on a daily basis, and wastewater sampling is required on a monthly basis when effluent is being applied to the site. Wastewater monitoring parameters from the previous permit have been carried over unchanged into the draft renewal permit. The permittee is required to conduct ground water monitoring once per year and soil monitoring once per year; these requirements were carried over from the previous permit. The facility is also required to conduct flow meter calibrations in 2014 and 2019.

The permittee is also required to submit an annual report that includes 1) all monitoring conducted under the terms of the permit, 2) the status of compliance activities required by the permit, and 3) an interpretive discussion of the monitoring data with particular respect to any potential environmental impacts. The annual report is due by January 31<sup>st</sup> of each year, and should address operations conducted from November 1 thru October 31 of the preceding year.

#### **5. RECOMMENDATIONS**

Based on review of applicable state rules, staff recommends that DEQ issue draft permit M-029-03 for a public review and comment period. The draft permit contains effluent quality requirements for the wastewater treatment system, as well as terms and conditions required for operation of the reuse system. Monitoring and reporting requirements to evaluate system performance and to determine permit compliance have been specified, and compliance activities have been incorporated into Section 4 of the permit.