

Janice K. Brewer  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007  
(602) 771-2300 • www.azdeq.gov



Henry R. Darwin  
Director

Registered Mail/Return Receipt

September 2, 2011

Mr. Joel Peterson  
Synergy Environmental, LLC  
10645 N. Tatum Blvd., Suite 200 - 437  
Phoenix, AZ 85028-3053

Re: Review of RID-95 Wellhead Pilot Treatment System Proposal Work Plan  
West Van Buren Area  
Water Quality Assurance Revolving Fund Registry Site

Dear Mr. Peterson:

The Remedial Projects Unit (RPU) of the Arizona Department of Environmental Quality (ADEQ) reviewed the above referenced report. The RID-95 Wellhead Pilot Treatment System Proposal Work Plan (work plan) dated August 18, 2011 and received by ADEQ RPU on August 22, 2011, was prepared by Synergy Environmental, L.L.C. for Gallagher & Kennedy, P.A. and on behalf of the Roosevelt Irrigation District (RID). RPU reviewed the work plan under a working agreement dated October 8, 2009 and signed by both RID and ADEQ.

It is ADEQ's understanding that the pilot tests described in the work plan are being undertaken to determine whether well head treatment can be an effective treatment technology meeting one or more of the objectives of a Water Quality Assurance Revolving Fund (WQARF) Early Response Action (ERA), including reducing the cost of the final remedy, providing for an alternative water supply, and/or mitigating contaminant exposure. Because the work plan describes activities that might justify a modification or addition to the already approved ERA, ADEQ is not approving the work plan in the context of the ERA approved on June 24, 2010. However, ADEQ concurs that the implementation of the work plan may yield data justifying a modification to the ERA, and therefore agrees to its implementation, provided that RID complies with all other applicable requirements related to the installation and operation of a well head treatment system, and provided that RID pumps the wells associated with the well head treatment systems at rates consistent with historic pumping levels at each well. Because the effects of changes in pumping rates have not yet been evaluated, as requested in Tasks 2 and 3 as conditioned in the ERA approval, it is imperative that historic pumping rates be maintained until that analysis can be completed.

Southern Regional Office  
400 West Congress Street • Suite 433 • Tucson, AZ 85701  
(520) 628-6733

*Printed on recycled paper*

Additional comments are provided herein to assist RID in optimizing the design, construction and operation of the pilot systems and to provide some guidance on data ADEQ would need should RID request an ERA modification as a result of pilot tests.

### **General Comments**

The work plan for a remediation system should have a signature page including a registered professional's signature and stamp and author's signature.

The work plan should indicate that all construction activities and specifications will be in conformance with the United Building Code (UBC) and all applicable state and local codes and regulations. Also, all necessary permits/approvals must be obtained.

### **Specific Comments**

1. Section 2. – This section discusses the limited volatile organic compounds (VOC) that RID will be evaluated during the test. Other compounds may be present in the canal that would effect the carbon treatment and should be discussed and addressed (e.g., vinyl chloride, chromium and methyl-tert-butyl ether (MTBE)).
2. Section 2.5 – ADEQ recommends the use of bag or sock filters prior to the granular activated carbon (GAC) canisters to reduce/prevent fouling of the GAC canisters by suspended solids and reducing/eliminating the need to backwash the GAC canisters. Pre-filtration is discussed in Appendix A of the ERA Work Plan.
3. Figure 1 – The figure is very difficult to read and a larger readable figure should be provided.
4. Section 3 – Design detail should be included in the work plan. Submitting these data when the system is 90% complete does not allow ADEQ to conduct a thorough review and identify needed changes before the system is nearing completion. The section should discuss the pressure available at the RID well and whether booster pumps are needed to move the water through the treatment system. The section should also discuss the proposed duration of the pilot treatment test.
5. Section 4.2, Table – Effluent port sampling should be weekly until stability in contaminant concentrations can be demonstrated. An asterisk should be added to each "Monthly" under frequency; the asterisk should indicate below the table that an increase to a monthly frequency will be based on an evaluation of initial weekly data with a change to monthly frequency after system stabilizes.
6. Section 5, Sixth Bullet – Operational data should be reviewed on a monthly basis.
7. Section 7.1 – The near-term assessment period should be one month. ADEQ has not been presented a detailed design of the system as a result, ADEQ did not evaluate the Pilot System to confirm safeguards for protection.
8. Section 9 – On December 16, 2010 (reissuance on February 9, 2010), ADEQ approved the Abridged Well Investigation Work Plan for RID wells 95, 114, and 92. On July 7, 2011 ADEQ approved the RID request to substitute the well investigation of replacement well RID 111 instead of RID 114. ADEQ suggests that RID ensure that the installation

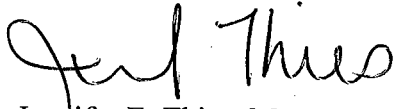
Mr. Joel Peterson  
September 2, 2011

RPU11:129  
Page 3 of 3

of the well head treatment systems not interfere with RID's ability to conduct the well investigations as approved by ADEQ.

Please contact Jennifer Thies at (602)771-4703 if you have any questions or comments regarding this letter.

Sincerely,



Jennifer E. Thies, Manager  
Remedial Projects Unit, ADEQ

cc: Stan Ashby, RID  
David Kimball, Gallagher & Kennedy, P.A.