

# ROOSEVELT IRRIGATION DISTRICT

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October 20, 2014

Ms. Tina LePage, Manager  
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Arizona Department of Environmental Quality  
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**Re: RESPONSE TO COMMENTS: REVIEW OF OPERATION AND MAINTENANCE PLAN –  
ROOSEVELT IRRIGATION DISTRICT WELLHEAD TREATMENT SYSTEMS**

West Van Buren WQARF Registry Site  
Phoenix, Arizona

Dear Ms. LePage:

The Roosevelt Irrigation District (RID) has reviewed comments by the Arizona Department of Environmental Quality (ADEQ) and three (3) individuals/entities (David Iwanski, a WVBA Site CAB member; Ridenour Hienton, PLLC, counsel for Meritor, Inc., and Fennemore Craig, PC, counsel for Nucor Corporation and BNSF Railway Company) on the *Operation & Maintenance Plan, RID Wellhead Treatment Systems* (O&M Plan), dated October 2013 (Revision 3), received on September 5<sup>th</sup>, 2014. As requested, the following responses to ADEQ comments and the stakeholder comment letters are being submitted within 45 calendar days of the date of ADEQ's letter. Also, with this letter, RID is submitting a revised O&M Plan for ADEQ's review, and if appropriate, approval pursuant to Arizona Administrative Code (A.A.C.) R18-16-411(E)(1) and "certification by the Department that the elements of the operations and maintenance plan adequately protect public health against treatment system failure" in accordance with A.A.C. R18-16-411(E)(1).

## RESPONSES TO ADEQ REQUIRED INFORMATION

*Comment #1: "In accordance with A.A.C. R18-16-411(E)(4), the O&M Plan shall include 'a process for the treatment system operator to promptly notify potentially affected water providers of a failure of a key treatment system component that could affect the quality of a discharge of treated water.'*

*While RID has provided a brief notification procedure description in Section 4.1, which includes notification to ADEQ, RID has not included potentially affected water providers such as the City*

*of Phoenix, the City of Tolleson, and Salt River Project. ADEQ requests that RID update Section 4.1 to include the notification of other potentially affected water providers.”*

**RID’s Response:** Treated water from the wellhead treatment systems currently is exclusively discharged to RID canals and laterals. Consequently, there are no other potentially affected water providers within the WVBA Site that would be affected by a discharge of treated water in the event of significant process control issues or failures at any of the wellhead treatment systems. However, if water provider conditions change in the future, the revised O&M Plan will be updated to include proper notifications to those other potential water providers that could be affected by a discharge of treated water. This new language is included in Section 4.1 of the revised O&M Plan.

*Comment #2: “Pursuant to A.A.C. R18-16-411(E) and R18-16-404, an opportunity for public comment on an operations and maintenance plan shall be provided. The public comment period commenced on June 19, 2014 and concluded on July 21, 2014. ADEQ received comment letters from three individuals/entities (enclosed).*

*ADEQ requests that RID submit a response to these comment letters, along with responses to ADEQ’s comments, within 45 calendar days of the date of this letter.”*

**RID’s Response:** As requested, this letter includes responses to ADEQ’s comments and the individual comment letters received during the public comment period ending July 21, 2014 for Revision 3 of the O&M Plan.

*Comment #3: “ADEQ requests that RID submit a revised O&M Plan within 45 calendar days of the date of this letter. Once received, ADEQ will review, and if appropriate, provide approval pursuant to A.A.C. R18-16-411(E) and ‘certification by the Department that the elements of the operations and maintenance plan adequate[ly] protect public health against treatment system failure’ in accordance with A.A.C. R18-16-411(E)(1).”*

**RID’s Response:** The revised O&M Plan is being submitted with this letter.

## **RESPONSES TO ADEQ RECOMMENDATIONS**

Although the following general and specific comments by ADEQ are not required by State law and there are no legal consequences if RID chose to disregard them, RID considered each comment and revised the O&M Plan as indicated in the following responses.

*Comment #4: “Engineering drawings from each treatment system should be included as an appendix to the O&M Plan including a cross section of the influent/effluent pipelines with the materials of construction noted.”*

**RID's Response:** Engineering drawings for each wellhead treatment system have been included in the revised O&M Plan as Appendix A (RID-89), Appendix B (RID-92), Appendix C (RID-95), and Appendix D (RID-114).

*Comment #5: "Tables should be included that show the normal operating pressures at all monitored locations for each treatment system."*

**RID's Response:** The requested tables have been included in Section 4.2 of the revised O&M Plan.

*Comment #6: "Discussion is needed regarding the engineering features of the outlet structures. It is not clear to ADEQ how the discharge structures were modified to accommodate the discharge piping."*

**RID's Response:** A summary of modifications to the discharge structures for each wellhead treatment system is included in Section 3.0, and construction details are presented in the engineering drawings now included as Appendices A through D of the revised O&M Plan.

*Comment #7: "Discussion is needed regarding routine system start-up. The interaction with the SCADA system, such as clearing any alarms, time delays on automatic system controls, and start-up trouble shooting, should be included."*

**RID's Response:** The requested discussion, as applicable, has been included in Section 4.5.1 of the revised O&M Plan.

*Comment #8: "Section 1.0 – Introduction, page 5, last paragraph and page 6, second complete paragraph: To provide a more accurate description of the approval letters from ADEQ to RID, ADEQ requests that RID add the word "conditional" or "conditionally" in front of any references to ADEQ's conditional approval of RID's Early Response Action (ERA) Work Plan and Modified ERA Work Plan."*

**RID's Response:** The requested changes, as described, have been incorporated in the revised O&M Plan.

*Comment #9: "Section 2.2 – Contaminants of Concern, page 8: The list of contaminants of concern (COCs) contains methyl tert-butyl ether (MTBE) which is not considered a COC of the WVBA WQARF site. ADEQ suggests removing MTBE from the WVBA WQARF site COC list or define the list to be specific to RID's concerns."*

**RID's Response:** As requested, MTBE has been removed from the list of COCs in the revised O&M Plan.

*Comment #10: "Section 4.0 – Operation and Maintenance: ADEQ requests that RID include information on the recently completed warranty repairs on the wellhead treatment systems."*

**RID's Response:** As requested, a summary of the warranty repairs on the wellhead treatment systems has been included in Section 4.3 of the revised O&M Plan.

*Comment #11: "Section 4.1 – System Operation Upset Notifications: In addition to Comment 1 under 'Required Information', ADEQ requests that RID specify the maximum amount of time that will lapse before the system operator will 'promptly notify potentially affected water providers' in accordance with A.A.C. R18-16-411(E)(4).*

*ADEQ recommends including the contact information for the individuals and entities to be notified in the O&M Plan."*

**RID's Response:** As indicated in our response to *Comment #1*, currently there are no other potentially affected water providers within the WVBA Site that would be affected by a discharge of treated water in the event of significant process control issues or failures at any of the wellhead treatment systems. However, if water provider conditions change in the future, the revised O&M Plan will be updated to include proper notifications to those other potential water providers that could be affected by a discharge of treated water.

*Comment #12: "Section 4.2 – Well Pump Details, page 12: Please provide a brief description of the operation of each of the RID wells. Please include the operating pressure at each well head and indicate whether the flow is controlled by a variable frequency motor."*

**RID's Response:** The requested information regarding operation of each of the RID wells has been included in Sections 4.2 and 4.5.1, and Table 2 of the revised O&M Plan.

*Comment #13: "Section 4.3 – IGAC Treatment Skids, page 13: For ease in referring to the location of the appropriate vessel on the pictures included in Section 3.0, ADEQ suggests that RID add the vessel identifications provided in Section 4.3 onto the pictures."*

**RID's Response:** The requested information has been moved from Section 4.3 to Section 3.0, and vessel labels have been added to the aerial photos for each wellhead treatment system site.

*Comment #14: "Section 4.4.2 – Bypass Mode: ADEQ recommends that RID provide information regarding the notification process when the wellhead treatment systems are placed into bypass mode. It would be prudent for RID to include a process for notifications of planned, unplanned, partial, or full bypass."*

**RID's Response:** The revised O&M Plan includes a procedure for notifications when operational changes are made to the wellhead treatment systems (Section 4.1). The notifications will be

made when a treatment system(s) are changed from treatment mode to bypass mode (i.e., full bypass) due to an unplanned system upset event. There may be other operational changes that require partial bypass during carbon change-out activities or changes in RID's water demand, which will be documented in the Monthly Progress Reports as described in Section 6.2 of the revised O&M Plan.

*Comment #15: "Section 4.4.3 – IGAC Change-Outs and Backwash: ADEQ requests RID to include the following with respect to the Point of Compliance (POC) sample(s):*

- a. Describe the locations of POC sample ports within the treatment train.*
- b. Inclusion of the above information within 'Section 2.4 – Treatment Goals'.*

*ADEQ suggests that RID discuss the estimated carbon change out frequency at each treatment site based upon recent influent concentrations."*

**RID's Response:** The requested POC sample port information has been included in Section 2.4 of the revised O&M Plan, and the estimated carbon change-out frequency discussion has been included in Section 4.4.3.

*Comment #16: "Page 15, Section 4.5, Instrumentation and Control: Portions of the narrative discussing instrumentation appear to contradict figures 2 through 5. Specifically, the figures do not show flow meters on all bypass piping, well head pressure indicators, or pressure gauges, used to measure differential pressure, downstream of the carbon vessels.*

*ADEQ also suggests that information be added to the instrumentation section mentioning the monitoring of water levels in secondary containment sumps."*

**RID's Response:** Figures 2 through 5 from Revision 3 of the O&M Plan have been revised as piping and instrumentation diagrams and include all requested instrumentation. These new figures have been renamed as Figures 3 through 6 in the revised O&M Plan. Also, the requested information regarding monitoring of water levels in the secondary containment sumps has been added to Section 4.5.5 and the Weekly Operation and Maintenance Inspection Form (Appendix J) in the revised O&M Plan.

*Comment #17: "Section 4.5.1 – Well Pumps: ADEQ suggests including the location of the pressure readings mentioned in the last two bullets and modifying the applicable figures accordingly."*

**RID's Response:** The requested information has been added to Section 4.5.1 and the piping and instrumentation diagrams (Figures 3 through 6) in the revised O&M Plan.

*Comment #18: "Section 4.5.2 – Flow Meters: ADEQ suggests including the value for the low flowrate that will cause the well pump to shutdown as alluded to in the second bullet at the top*

*of page 16 which states that low flow is a shutdown condition. Note that this appears to contradict what is stated in the third bullet of this section.*

*ADEQ requests that RID include the position of the flow meters located on the bypass piping on Figures 2, 3, and 5."*

**RID's Response:** Since the low flow rate alarm is not a critical condition, it will not shut down a well pump as described in Section 4.5.2 of Revision 3 of the O&M Plan. Therefore, Section 4.5.2 has been corrected in the revised O&M Plan. The new piping and instrumentation diagrams include the position of flow meters located on all bypass piping (Figures 3 through 6).

*Comment #19: "Section 4.5.3 – Pressure Transmitters: ADEQ suggests including the value of the high differential pressure that would be considered critical to warrant shutdown of the well pump. The location of the pressure transmitters should be included on figures 2 through 5.*

*ADEQ requests that RID include a discussion of the expected pressure losses across the 3-way valve when a portion of the total flow is diverted to the bypass piping. The pressure loss across the valve should be acknowledged and considered when the operator evaluates the pressure differential set point of 25 pounds per square inch."*

**RID's Response:** The new piping and instrumentation diagrams, Figure 3 through 6 in the revised O&M Plan, include the locations of all pressure transmitters. Differential pressure is a measurement for each treatment skid, which measures the pressure difference across the LGAC vessels (at the influent and effluent locations). Therefore, any pressure loss across the 3-way valve when a portion of the total flow is diverted to the bypass piping is completely independent of the differential pressure measurement, and does not need to be considered in the controls system.

*Comment #20: "Section 4.5.5 – Sump Level Switches: ADEQ recommends that a referral to the notification procedure in Section 4.1 be included in this section for when the wellhead treatment systems are switched to bypass mode because of a high-high critical alarm associated with the secondary containment sump.*

*ADEQ requests that RID provide a discussion of why the secondary containment sump pumps do not operate automatically in response to high sump water levels which is typical practice. ADEQ requests additional discussion regarding why a high-high level in the sump does not result in a system shut down but only a diversion of water to the bypass piping. With this functionality, it appears that the system will continue to operate even if water is leaking upstream of the diversion valve or from the bypass piping.*

*The complete pipe route from the secondary containment sump to the discharge point should be detailed on figures 2 through 5."*

**RID's Response:** As requested, Section 4.5.5 of the revised O&M Plan has been updated to include a referral to the notification procedure outlined in Section 4.1.

RID has considered ADEQ's comment regarding automatic operation of the sump pumps. Now that the wellhead treatment systems have been operating for several pumping seasons, RID is comfortable changing the controls system so that the sump pumps operate automatically in response to a high liquid level alarm, and then automatically shut-off the well pump in response to a high-high liquid level critical alarm (in lieu of switching the systems to bypass mode).

The requested pipe route from the secondary containment sump to the discharge point are included in the new piping and instrumentation diagrams (Figures 3 through 6), and detailed in the engineering drawings included in Appendices A through D.

*Comment #21: "Section 4.5.6 – SCADA System and Control Strategy, page 19: ADEQ requests that O&M Plan include screen shots from the SCADA system. The information provided in this section does not adequately document the remote system operation. ADEQ recommends that a table outlining the SCADA system alarm parameters be included in this section."*

**RID's Response:** A new appendix (Appendix G) will include screen shots from the SCADA system, however, since the wellhead treatment systems are not operating, the screen shots will need to be included after the treatment systems are restarted to show relevant operational data. Due to RID's historical pumping operations / customer water demand, the treatment systems may not be restarted until March 2015. RID will provide ADEQ with the requested SCADA system screen shots as soon as they are available to include in its copy of the revised O&M Plan.

As requested, a table that outlines the SCADA system alarm parameters has been included in Section 4.5.6 of the revised O&M Plan.

*Comment #22: "Section 4.5.9 – Unplanned Shutdowns/System Operation Upset Events: ADEQ advises that a referral to the notification procedure in Section 4.1 be included in this section for when a power outage, heavy rain or critical alarm occurs. ADEQ recommends that a list of the critical alarm conditions be provided in this section."*

**RID's Response:** The requested information has been included in Section 4.5.9 of the revised O&M Plan. However, there is only one critical alarm that will automatically shut off the well pump, which is the high wellhead pressure shut-off condition. These details are included in the revised O&M Plan.

*Comment #23: "Section 4.6 – Sampling and Analysis: The Field Sampling Plan and Quality Assurance Plan for the WVBA WQARF site was not developed with the sampling and QA/quality control (QC) procedures for the operations of a groundwater treatment/remedy system. As*

*such, ADEQ recommends that RID develop their own sampling and QA/QC procedures for their wellhead treatment systems.”*

**RID’s Response:** References to the Field Sampling Plan and Quality Assurance Plan for the WVBA WQARF site have been removed from the revised O&M Plan, which now includes RID’s own sampling and QA/QC procedures for the wellhead treatment systems.

*Comment #24: “Section 4.6.2 – Frequency and Locations of Sampling: ADEQ requests that any change in sampling frequency be approved by the department before implementation.”*

**RID’s Response:** RID will request ADEQ’s approval for any change in sampling frequency for the wellhead treatment systems. The revised O&M Plan includes this new requirement in Section 4.6.2.

*Comment #25: “Section 4.6.3 – Sampling Methods: Refer to Comment 23. In addition, ADEQ suggests that RID clarify that samples to be collected are for system operations purposes as opposed to investigative. ADEQ also recommends that RID develop their own Health and Safety Plan (HASP) that is specific to the work being conducted by RID and its contractors.”*

**RID’s Response:** As indicated in RID’s response to Comment #23, references to the Field Sampling Plan and Quality Assurance Plan for the WVBA WQARF site have been removed from the revised O&M Plan, which now includes RID’s own sampling and QA/QC procedures for the wellhead treatment systems. Also, Section 4.6.3 of the revised O&M Plan now specifically refers to the sampling program as the “wellhead treatment systems sampling program” to ensure that the samples collected could not be interpreted as investigative. Lastly, RID has developed its own Health & Safety Plan for the wellhead treatment systems which is included as Appendix H of the revised O&M Plan.

*Comment #26: “Section 5.0 – Spent GAC Management: ADEQ suggests that RID include or reference the procedure for collecting a representative grab sample of carbon for analysis and profiling.”*

**RID’s Response:** Section 5.0 has been updated to include the procedure for collecting a representative grab sample of carbon for analysis and profiling in the revised O&M Plan.

*Comment #27: “Section 6.2 – Progress Reports: ADEQ noted that the example progress report included in Appendix K did not include information that covered all of the bulleted items in this section. ADEQ recommends that documentation of carbon change out be included in the progress reports.*

*Note that in general, RPU requests one hardcopy and one electronic copy of monthly progress reports.”*



**RID's Response:** A historical Monthly Progress Report is now included as an appendix of the revised O&M Plan (Appendix L). The example Report includes all the information described in the bulleted items in Section 6.2. As requested, the revised O&M Plan also specifies that RID will submit one hardcopy and one electronic copy of future Monthly Progress Reports to ADEQ.

*Comment #28: "Figure 1 – Study Area: ADEQ requests the following changes to Figure 1:*

- a. Update current plume boundaries.*
- b. Update label of RID-111 to RID-111R.*
- c. Label the RID wells with wellhead treatment systems differently than the wells without treatment systems.*
- d. Add a boundary outline for the Phoenix Central City and Estrella urban villages that are described in Section 2.1."*

**RID's Response:** The revised O&M Plan includes a new Figure 1, titled "Site Location Map", which presents the boundaries for the Phoenix Central City and Estrella urban villages that are described in Section 2.1. Figure 1 of the O&M Plan (Revision 3) has been revised with current plume boundaries; correct label for RID-111R; and includes different well symbols for the RID wells with wellhead treatment systems. This revised figure has been renamed Figure 2 (Site Map and Vicinity) in the revised O&M Plan.

*Comment #29: "Figures 2 through 5: ADEQ requests that the figures be revised to include items mentioned in previous comments as well as:*

- a. Accurate and complete piping and instrumentation diagrams (PID) for each treatment system.*
- b. The title of the figures "process flow diagram" should be revised to reflect what is included in the figures since process information such as flow rates, temperatures, and pressures are not provided.*
- c. Identification of all flow and pressure transmitters and water level switches.*
- d. Show all valves, sampling ports, and air release valves on the carbon vessels."*

**RID's Response:** Figures 2 through 5 from Revision 3 of the O&M Plan have been revised as piping and instrumentation diagrams and include all the instrumentation requested. These new figures have been renamed as Figures 3 through 6 in the revised O&M Plan.

*Comment #30: "Appendix H – Health and Safety Plan:*

*General*

*ADEQ recommends that RID develop their own HASP that is specific to the work being conducted by RID and its contractors.*

*Section 1.1 – Scope of Work*

ADEQ requests, in order to provide a more accurate description of the approval letters from ADEQ to RID, that the word "conditional" be added in front of the reference to ADEQ's conditional approval of RID's Early Response Action (ERA) Work Plan.

#### *Section 2.0 – Work Objectives*

ADEQ suggests including details regarding the following work objectives related to the wellhead treatment systems: operations, inspections, maintenance, and sampling.

#### *Section 5.0 – Key Personnel and Emergency Contact List*

ADEQ advises that RID should consider updating the key personnel and emergency contact list.

#### *Section 6.0 – Emergency Procedures*

ADEQ requests that the emergency procedures that are not incorporated by reference be listed or that RID develop their own HASP that is specific to the work being conducted by RID and its contractors.

#### *Figure 1 – West Van Buren Project Area*

ADEQ requests the following changes to Figure 1:

- a. Update current plume boundaries.
- b. Update label of RID-111 to RID-111R.
- c. Label the RID wells with wellhead treatment systems differently than the wells without treatment systems.

#### *Figure 2 – Hospital Location Map*

ADEQ requires the following changes to Figure 2:

- a. Add the locations of the RID wells with wellhead treatment systems."

**RID's Response:** As recommended, RID has developed its own Health & Safety Plan for the wellhead treatment systems which is included as Appendix H of the revised O&M Plan. The Health & Safety Plan incorporates ADEQ's recommended changes, where applicable.

*Comment #31: "Appendix J – Weekly Operation & Maintenance Inspection Form: ADEQ recommends that the form include the following:*

- a. Documentation of site conditions as they relate to site security.
- b. Documentation of water present in the secondary containment sumps and the suspected source (rainfall, system piping, valves, tank, etc.)
- c. A schedule for checking the secondary containment sump pumps, water level switch operation, and exercising of all treatment system valves.
- d. Totalizer readings of all flow meters and inspection of the well heads and discharge structures.
- e. Documentation of carbon change-outs."

**RID's Response:** The Weekly Operation and Maintenance Inspection Form has been updated to include ADEQ's recommendations. The new form is included as Appendix J in the revised O&M Plan.

## RESPONSES TO INDIVIDUAL COMMENTS

Letter #1 – David C. Iwanski, a West Van Buren Area CAB Member, *Submittal of formal comments, Operation and Maintenance Plan for the West Van Buren Area WQARF Site prepared for ADEQ by Synergy Environmental, LLC on behalf of the Roosevelt Irrigation District, dated July 21, 2014.*

Mr. Iwanski recommended that more specific provisions be incorporated for notification to ADEQ of significant “upset events” such as extended interruption of treatment (by-pass) due to system failure and/or the release of untreated water.

**RID's Response:** Additional detail, as requested, for notification to ADEQ of significant “upset events” has been included in Section 4.1 of the revised O&M Plan.

Letter #2 (and addenda) - Ridenour Hienton, PLLC, Counsel for Meritor, Inc., *Comments on the Roosevelt Irrigation District (RID's) “Operation and Maintenance Plan – RID Wellhead Treatment Systems” (Synergy October 2013-Revision 3), dated July 14, 2014.*

*Comment #1: RID should be required to create a separate O&M Plan for RID-89, RID-92, RID-95 and RID-114*

**RID's Response:** All wellhead treatment systems pump and treat groundwater from a commingled plume, are operated from one central field office, and are comprised of identical equipment sets, control valves, RTUs, instrumentation, etc. The primary differences include the capacity of the wells feeding the treatment systems and the routing of the treatment system piping, which is not a significant aspect for O&M considerations. RID does not believe these differences merit generating four (4) separate plans, and therefore, only one (1) O&M Plan will be used for the wellhead treatment systems. Similarly, these wellhead treatment systems are part of a single effort to address regional contamination pursuant to the ADEQ-approved Modified ERA, dated February 1, 2013.

*Comment #2: “ADEQ has indicated in the past that the MERA would not be approved based upon the ‘availability of funds.’ It would seem that RID has abandoned MERA Phase 2 and the four additional LGAC systems proposed and previously approved by ADEQ. ADEQ should document this fact in a modification of the ADEQ’s conditional approval of the MERA dated February 1, 2013.”*

**RID's Response:** RID is unaware of ADEQ statements that might suggest the MERA would not be approved based on the availability of funds. Any such statement would be inconsistent with the express terms of RID's *Agreement to Conduct Work* with ADEQ dated October 8, 2009, and amended February 27, 2014. This agreement specifies that RID will conduct all work required by approved work plans and that these obligations are legally enforceable when adequate funds are available from potential responsible parties (PRPs), cost recovery actions or third parties. Such a request is not only contrary to the facts, but is outside the scope of the O&M Plan.

RID has not "abandoned" the installation of additional treatment systems documented in the MERA Work Plan. Indeed, RID has taken substantial steps at considerable expense to initiate the MERA and installed four of the proposed eight wellhead treatment systems. RID also has conducted a Feasibility Study (FS) pursuant to its *Agreement to Conduct Work* with ADEQ to develop and analyze remedial alternatives to address regional groundwater contamination in the WVBA WQARF Site. RID is prepared to implement the more cost-effective recommended groundwater remedy from the RID FS Report as an alternative to the full implementation of the MERA Work Plan. Otherwise, RID is prepared to install and operate the remaining four treatment systems approved by ADEQ in the Modified ERA Work Plan. We anticipate that ADEQ, like RID, will require that parties, such as Meritor, who are PRPs for the groundwater contamination being addressed by RID response actions, will pay the full cost of addressing the pollution for which they are liable.

*Comment #3: "To date, RID has not submitted the required Schedule of Implementation for the MERA as required under AACR 18-16-405(D)(3). ADEQ should require RID to comply with regulation."*

**RID's Response:** RID identified a schedule for implementation of the MERA Work Plan in terms of approximate task frequency for recurring tasks and estimated task duration for non-recurring tasks. RID also clearly stated there was uncertainty associated with the time required to secure project funding that would allow the schedule to proceed. This remains true today, and there is currently no reasonable basis to define a specific timeline for project execution. Once project funding is available from PRP cost recovery actions or third parties and ADEQ has made a determination on RID's FS Report, RID will, if necessary, submit a detailed project schedule, which will become a legally enforceable component of the MERA Work Plan, in accordance with RID's *Agreement to Conduct Work* with ADEQ. Regardless, this request is outside the scope of the O&M Plan.

*Comment #4: "RID should be required to complete their own specific HASP."*

**RID's Response:** As recommended by ADEQ (see ADEQ *Comments #25 and #30* above), RID has developed its own Health & Safety Plan for the wellhead treatment systems which is included as Appendix H of the revised O&M Plan.

*Comment #5: "Appendix J includes the 'Weekly Operation and Maintenance Inspection Form.' This report and data should be incorporated into Appendix K and submitted to ADEQ as part of the proposed Appendix K Monthly Report."*

**RID's Response:** The Weekly Operation and Maintenance Inspection Form has been updated to include ADEQ's recommendations (see ADEQ *Comment #31*). The new form is included as Appendix J in the revised O&M Plan. A historical Monthly Progress Report is now included as an appendix of the revised O&M Plan (Appendix L), as recommended by ADEQ. The example Report includes all the information described in the bulleted items in Section 6.2 as requested by ADEQ (see ADEQ *Comment #27*).

*Comment #6: "I suggest ADEQ should demand that RID revise the Monthly Report to track and report these metrics. How do you know if they are operating? Note: Section 4.5 Instrumentation and Controls in RID's O&M Plan indicates they have instrumentation to document these parameters."*

**RID's Response:** A historical Monthly Progress Report is now included as an appendix of the revised O&M Plan (Appendix L), as recommended by ADEQ. The example Report includes all information described in the bulleted items in Section 6.2 as requested by ADEQ (see ADEQ *Comment #27*).

*Comment #7: "Section 4.1 – Although immediate notification of adverse control conditions are important to RID, Synergy and ADEQ, under AAC R 18-16-411(E)(4) it requires that a process for the water treatment system operator to also promptly notify 'potentially affected water providers' of a key treatment system component that could affect the quality of a discharge of treated water. This may include the City of Phoenix or the Salt River Project."*

**RID's Response:** Treated water from the wellhead treatment systems currently is exclusively discharged to RID canals and laterals. Consequently, there are no other potentially affected water providers within the WVBA Site that would be affected by a discharge of treated water in the event of significant process control issues or failures at any of the wellhead treatment systems. However, if water provider conditions change in the future, the revised O&M Plan will be updated to include proper notifications to those other potential water providers that could be affected by a discharge of treated water. This new language is included in Section 4.1 of the revised O&M Plan.

*Comment #8: "There are twenty-two (22) technical comments which are included under Exhibit 2. These identified issues reflect technical problems with the O&M Plan which must be addressed. ADEQ should review and direct RID to make the 22 identified technical revisions."*

**RID's Response:** All specific comments identified by ARCADIS U.S., Inc. are appreciated and were considered. For those comments that were also identified by ADEQ, the recommended

changes were already included in the revised O&M Plan. For new comments that were favorably considered, the revised O&M Plan was modified to address those comments.

In response to General Comment #3, there are no permits required to operate the wellhead treatment systems.

In response to Specific Comment #3, spare parts are identified in the engineering drawings now included as Appendices A through D, and the Siemens O&M Manual included as Appendix E of the revised O&M Plan.

Other comments that were considered but not addressed in the revised O&M Plan were not regarded as "technical problems", and therefore, not necessary elements to adequately protect public health against treatment system failure.

Letter #3 - Fennemore Craig, P.C., counsel for Nucor Corporation and BNSF Railway Company, *Comments on the Roosevelt Irrigation District's ("RID") "Operation and Maintenance Plan"*, dated July 21, 2014.

*Comment: "It is more logical to consider these four wellhead treatments as four separate treatment facilities requiring four separate O&M Plans."*

**RID's Response:** All wellhead treatment systems pump and treat groundwater from a commingled plume, are operated from one central field office, and are comprised of identical equipment sets, control valves, RTUs, instrumentation, etc. The primary differences include the capacity of the wells feeding the treatment systems and the routing of the treatment system piping, which is not a significant aspect for O&M considerations. RID does not believe these differences merit generating four (4) separate plans, and therefore, only one (1) O&M Plan will be used for the wellhead treatment systems. Similarly, these wellhead treatment systems are part of a single effort to address regional contamination pursuant to the ADEQ-approved Modified ERA, dated February 1, 2013.

We appreciate your prompt review of the attached revised *O&M Plan, RID Wellhead Treatment Systems* (Revision 4), and are available to meet at your convenience regarding any questions you may have.

Best Regards,  
Roosevelt Irrigation District



Donovan L. Neese

Superintendent

cc: Danielle Taber, Arizona Department of Environmental Quality  
David Kimball, Gallagher & Kennedy  
Lawrence Moore, Lawrence Moore & Associates  
Dennis Shirley, Synergy Environmental