

## Aquifer Protection Permit Compliance Checklist

*This checklist is provided as a tool for permit holders and ADEQ staff to have a consistent understanding of the major compliance expectations under this permit. This checklist is designed to be easy to read and follow. It is intended only to address the permit requirements that ADEQ feels are the most important to protect human health and the environment. This list does not include every permit condition and permit holders should ensure they understand the full requirements of their permit. This list does not supplant or supersede any legal requirement and is not binding on the permit holder or ADEQ staff.*

<b>Facility Name:</b> Pecan WRP <b>Place ID:</b> 18583	<b>Inspection No:</b> 305632 <b>Inspection Date:</b> 07/17/2018
<b>Inventory/Permit #:</b> 105324 <b>Current LTF#:</b> 65812	<b>Inspector(s):</b> Isa Valdez and E. Leiter
<b>Facility Address:</b> 38539 N. Gantzel Rd <b>City, State, Zip:</b> Queen Creek, AZ 85140 <b>County:</b> Pinal	<b>Inspector Phone:</b> 602-771-2302 <b>Inspector Email:</b> valdez.isa@azdeq.gov
<b>Permittee/Responsible Party:</b> Johnson Utilities, LLC <b>Contact:</b> Gary Drummond <b>Mailing Address:</b> 5230 E Shea Blvd, Ste. 200 <b>City, State, Zip:</b> Scottsdale, AZ 85254 <b>Phone:</b> 602-2249222 <b>Email:</b> gdrummond@azvision.net	<b>WWTP Population Served:</b> < 29,000 <b>Treatment Plant Grade:</b> 4 <b>Collection System Grade:</b> 4
<b>Operator/ID:</b> Jed Lant / OP31799 for WW Treatment and Matt Hipsher / OP032611 for Collections <b>Phone:</b> 480-798-0413 <b>Email:</b> jed@johnsonutilities.com <b>Op. Cert. Grade/Expiration:</b> Jed: 4 WW Treatment and 4 Collections / 31-Oct-2018. Matt Hipsher: No WW Collection Certifications.	<b>Compliance Summary:</b> <b>Certified Operator</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Physical Facilities</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Monitoring and Reporting</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Results of Inspection:</b> <input type="checkbox"/> No deficiencies were noted during the course of the inspection. No ADEQ action will result from this inspection. <input checked="" type="checkbox"/> <b>Potential deficiencies were noted during the course of the inspection. Additional correspondence regarding this Inspection may be forthcoming.</b>	
<b>Inspection Report Issued:</b> Via email from ADEQ office <b>Facility Initial:</b> <b>ADEQ Initial:</b>	
<b>Potential Deficiencies:</b>  See Recommendations and Potential Deficiencies section below.	

**PHOTOGRAPHS TAKEN DURING INSPECTIONS ARE AVAILABLE ON REQUEST**

Documentation:		Comments
Does the facility have SMRF non-submittals or exceedances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The following parameters are permit limit exceedances:</p> <p><u>Reclaimed Class A+</u></p> <p>Daily Average turbidity exceedances.  Discharge Limit 2 NTU  Reported limit: 2.06 NTU on 2/11/2018  Reported Limit: 2.95 NTU on 2/20/2018</p>
If yes, do the exceedances meet the requirements for significant non-compliance? <i>(list in Comments)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>At the time of inspection, Jed Lant explained that all effluent is sent to for reuse since water usage is higher over the spring and summer months. Facility is permitted to reuse Class + Reclaimed Water according to Water Quality Standards (A.A.C. R18-11-11, Article 3). The facility representative stated they have sent reclaimed water to end-users. According to File Review, the turbidity exceedances do not qualify the water to meet A+ beneficial reuse standards.</p>
Were required notifications provided for violation of any permit condition, discharge limit, or exceedance of an alert level? <i>(list notifications in Comments)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<p>Johnson Utilities has not submitted Contingency Reports to ADEQ, addressing the following deficiencies:</p> <ul style="list-style-type: none"> <li>a. Turbidity exceedances;</li> <li>b. Notification to ADEQ about the process change in the disinfection treatment; and</li> <li>c. Notification of Unauthorized Discharges in the effluent tank and corrective actions.</li> </ul>
Were SMRFs and monitoring requirements discussed with the facility?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<p>At the time of inspection, ADEQ technical team explained to the facility that a File Review would be conducted at the office on 7/17/2018.</p>
Does the facility have any outstanding or overdue compliance schedule items? <i>(Section 3.0 in the permit)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>At the time of inspection, a total of 54 vadose zone wells were observed on site.</p> <p>Pecan WRP was originally approved to use twenty-two (22) vadose zone recharge wells and according to Compliance Schedule Items #5 and #6 required the facility to submit the Well Installation report for the thirty-two (32) recharge wells installed, within 60 days after the date of completion of well and testing. ADEQ did not receive notification of the installation of each permitted recharge well installed at the facility and the well installation reports within 90 days of installation.</p>

		At the time of inspection, the CD225M-DripPRime pump was observed to be functioning; however, facility did not submit the Engineer's Certificate of Completion to ADEQ, within 30 days after the date of completion of the pump installation. This was a requirement of CSI #9.
Does the facility have a copy of the current signed permit?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Not verified at the time of inspection
Is there a copy of the operations and maintenance manual on-site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	"
Is there a copy of the approved contingency/emergency response plan on-site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	"
Was there any unauthorized discharge of suspected hazardous, toxic, or non-hazardous materials? If so list corrective actions taken. (Section 2.6.5)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	At the time of inspection, Duane Kasun stated that effluent overflowed in the effluent tank, causing damage to the Ultraviolet Light mechanism.  In the event of any unauthorized discharges pursuant to A.R.S. 49-201(12) of non-hazardous material from the facility, the permitted shall notify the ADEQ Groundwater Section within 24 hours of discovering the discharge and submit a 30 day investigation and corrective actions report. This incident was not reported to ADEQ.
<b>Facility Description and Operational Monitoring Requirements</b>	<b>Requirement met?</b>	<b>Comments</b>
Is the log book of the inspections and measurements required by this permit updated and current?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Not verified at the time of inspection
Do the facility treatment processes match what is in the current permit?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Pecan WRP representative explained that the primary mechanism for disinfection is sodium hypochlorite. According to Duane Kasun, WWTP Operator, the Ultraviolet equipment failed due to an overflow in the effluent tank area. Based on an e-mail received on July 18, 2018 from Jed Lant, the change to the disinfection process occurred at least 6.5 years ago.  The ultraviolet light equipment was removed from the area. Pecan WRP is permitted to disinfect with Ultraviolet Light; chlorine disinfection can be used as back up mechanism. The change in disinfection technology has resulted in the recharge basins receiving effluent that has not been dechlorinated.

Is the facility being maintained according to the Operations and Maintenance Manual?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Excess of solids were observed at the treatment trains, including large objects such as personal hygiene products.
Freeboard in Recharge Basin: Minimum 1 ft.?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The recharge basins were not in use at the time of inspection. According to Jed Lant, all effluent is sent to the reclaim end-users.
Freeboard in Storage Basin: Minimum 2 ft.?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Do the treatment plant components appear to be in working order?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Bar Screen: Throughout the process, the aeration trains and clarifier was observed to have an excess of floating solids in the surface area. This is an indicator that large debris and hygienic products are not being properly removed by the bar screen mechanism.
Pond berm integrity: Is there any visible structural damage, breach, or erosion of embankments?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Recharge Basins: Are they in good condition and adequately scarified?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Vegetation, such a large trees were observed inside recharge basins.
Do the vadose zone wells appear to be in good working order? No evidence of biofouling, clogging, daylighting?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	At the time of the inspection, the recharge basin located at the southwest of the property had standing effluent daylighting.
<b>Compliance Monitoring</b>		<b>Comments</b>
<b>POC #2 – MW-1 , located N of the vadose zone recharge wells at the NE corner of the site.</b> Loc: 33° 35' 09" N 112° 21' 24" W <ul style="list-style-type: none"> <li>• Location verified?</li> <li>• Does the well appear to be in working order?</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Not verified at the time of inspection
<b>POC #3 – MW-2, located N of the vadose zone recharge wells at the NE corner of the site.</b> Loc: 33° 35' 09" N 112° 21' 24" W <ul style="list-style-type: none"> <li>• Location verified?</li> <li>• Does the well appear to be in working order?</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Not verified at the time of inspection
Field Methods – Is the facility using applicable on-site calibrations and quality assurance for BOD, T, pH, and turbidity?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Does the facility have a written QA manual for all analysis done on-site?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Are ADHS approved methods used for all analyses?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Did the facility have a method detection limit study for lab methods?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Are on-site lab instruments properly calibrated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Are on-site calibration and baseline reagents current and not expired?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“

Are on-site flow meters properly calibrated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“
Does the facility have a bench log sheet?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	“

## RECOMMENDATIONS AND POTENTIAL DEFICIENCIES :

During a site visit in support of a permit amendment for the Pecan plant, severe deficiencies in the plant's condition, operation and maintenance were observed by ADEQ. These conditions led ADEQ to provide JU representatives the notice of inspection rights and begin investigating observed deficiencies.

Further review of data was conducted at ADEQ offices on 7/17 – 7/19/2018. The following Johnson Utilities personnel attended: James Taylor, GHD, Engineering Consultant; Katherine Nierva, Engineering Department; Jed Lant, WWTP Manager; and Duane Kasun, WWTP Operator.

ADEQ staff included: Isa Valdez, Inspector; Ethan Leiter, Compliance Manager; Ryan Fitzpatrick, Hydrologist; Shivani Shah, Engineer; Monica Phillips, Permit Writer.

Deficiencies include:

1. **SMRF: Turbidity permit limit exceedances**
  - a. Provide the Contingency Actions reports for the turbidity permit limit exceedances.
  - b. Provide the Contingency Action for reclaimed water not meeting Class A+ quality.
2. **Reclaim water of lesser quality than permit has been send for beneficial reuse**, per permit R105412. These are activities are considered prohibited activities.
  - a. Provide an SOP that entails the actions to be taken by Pecan WRP staff when reclaim water of lesser quality is produced.
3. **No Contingency Reports were submitted to ADEQ**, regarding 5 day notification and 30 day investigations for the permit limit exceedance for turbidity and to report a recent effluent overflow at the plant.;
  - a. Provide an explanation of missing notifications to ADEQ, if needed conduct training with operators and compliance staff that shall submit these reports to ADEQ.
4. **Compliance Schedule Items (CSIs) regarding vadose zone wells were not submitted to ADEQ** within 90 days of construction, as according to CSI #6 in APP P-105324;
  - a. Provide CSI #5 and #6
5. **Compliance Schedule Items (CSI) #9 regarding the CD225M Dri-Prime pump**, the Engineer's Certificate of Completion was not submitted to ADEQ within 30 days after the date of completion.
  - a. Provide CSI #9
6. **Unpermitted Disinfection process, as it deviates from the permitted one**. Pecan WRP is permitted to disinfect treated effluent with Ultraviolet Light; chlorine disinfection can be used as back up mechanism;
  - a. Provide an explanation about the disinfection process change
  - b. Submit a scope of work to return to compliance and re-install the UV light systems.
7. **Excess of solids observed at the aeration trains**, including large objects and debris.
  - a. Submit a determination if current bar screen is removing all large objects and debris at the headworks. Implement appropriate corrective actions if bar screen is not working.

- b. Provide SOP for collecting material at the bar screen mechanism
  - c. Demonstrate that treatment trains no longer have floating objects on the surface.
8. **The four recharge basins are unpermitted discharging facilities;** and
- a. Complete the administrative APP application, to add discharging facilities to APP
9. **The influent lift station presented excessive signs of corrosion and offensive hydrogen sulfide odor.** Inspector observed what appears to be a degraded protective coating in the lift station walls.
- a. Submit corrective actions to be taken to rehabilitate concrete structures to address severe corrosion at influent lift station.
  - b. Submit corrective actions to be taken to address offensive hydrogen sulfide odor at influent lift station.
    - i. During a Site Assessment of the facility conducted in June 26, 2017, ADEQ conducted a compliance assistance visit and determined that hydrogen sulfide gas is corroding and deteriorating equipment located in the vicinity of this facility. Recommendations were made at that time to address hydrogen sulfide in the collection system and at the headworks.