

Diamond Bar Estates Homeowners Association

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IDAHO PUBLIC
UTILITIES COMMISSION

July 24, 2016

Idaho Public Utilities Commission
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Subject: Water Case No. DIA-W-15-01
Water Rates Committee Response #4

We reviewed the Diamond Bar Estates Water Company Response dated 7/7/16 to the PUC Commission as directed in Order No. 33547 dated 6/24/16 and have comments we would like entered into the case file for consideration by the Commissioners and Staff. In our opinion, the additional information and clarifications requested in Order No. 33547 for questions 1-5 have still not been answered adequately or with sufficient detail as requested.

These questions 1-5 relate to the excessive number of pump replacements that occurred in 2002 and 2004 per the Company logs and "2010, 2012, 2014, and twice in 2015" per the PUC Staff Report. Since "The average remaining life of the pumps is 18 years" according to the Staff Report, one would expect only 1 pump replacement since 2002 instead of the 7 replacements. Also, the failure rates have accelerated since 2010 with nearly 1 pump failure every year which would indicate a serious problem with the installation and/or operation of the plant facility.

We feel that the specific questions asked by the Commissioners in the Order are relevant for an evaluation of the root cause of the pump failures that is desperately needed to determine how to finally correct the problem. Without fixing the problem, the financial risk is significant as the Staff stated "The initial cost of the [last] four replaced pumps was \$51,444, with \$13,671 paid by the insurance company" clearly shows. Also, another indicator of the importance of fixing the root cause is that the insurance coverage for the main pump has been terminated.

We take exception to the Staff Report that the replacements are "significant investments in this water system" and "Staff's proposed treatment recognizes the unique circumstances that required multiple replacement" and "Staff therefore recommends an amortization period of 18 years". This would reward the Company for not properly installing, operating or maintaining the plant facility nor fixing the root cause of the pump failures as an obvious step in the process.

As stated in the Staff Report "Under normal accounting treatment upon the early retirement of an asset, the remaining book value would be written off as an extraordinary loss and would not be recoverable in rates" and we strongly urge the Commissioners to enforce this. Expecting the rate base to pay for this level of internal incompetence is not an acceptable alternative.

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We have compiled Questions 1-5 from Order No. 33547 and Responses 1-5 from the Company that are followed by our Comments 1-5 to address the missing details, additional information or of lack of a complete answer as follows:

Question 1. The AEI engineering report states that Kootenai Electric rules require a soft start on all motors larger than 20 hp. Prior to this report, was Diamond Bar ever made aware of this rule by Kootenai Electric or pump contractors working on prior pump motor failures? Please explain.

Response 1. The Company nor its Contractor, United Crown Pump and Drilling (UCPD) was not contacted by Kootenai Electric regarding changing from a full voltage non-reversing starter (FVNR) to a soft start. It was brought to the Company's and the Contractor's (UCPD) attention through the AEI Engineer Observation Report dated September 23rd, 2015. The report stated changing this component as a "Recommended action" not as a requirement. The original FVNR was approved and operational and the transformers were sized by KEC for the intended load(s). KEC's on-site testing confirmed that the original transformers were able to handle the load of the pumps and motors that were operating at that time. While a soft starter would have changed the power demand, it would not have affected the damage that occurred.

Comment 1.

In Attachment C of the Staff Comments at page 51 of 53 the KEC Electric Service Handbook under Section G Motors clearly states "All motors 20 hp or larger shall have soft starting" which would clearly apply to the 7 motors using 50 hp or 60 hp that were replaced by the Company. It is the responsibility of the Company and its Contractor to adhere to these KEC requirements.

The AEI engineering report states under Recommended actions to improve system protection Item 5 to "Replace the FVNR across-the-line starter serving the well pump with a solid state soft starter." Item 5a further states "The soft starter will not only be less stressful on the electrical system (reduced inrush current) and pump motor but will also provide a higher level of protection to the motor while running."

While AEI does not have jurisdiction over the Company and their recommendations are not mandatory, they are certainly guidelines that were prepared by qualified experts and should be enthusiastically implemented by the Company after a long history of 7 pump replacements.

The KEC Electric Service Handbook under Section G Motors also states "Variable frequency drives must meet the industry standard (IEEE Standard 519-1992) for harmonics. If they don't, it is the member's responsibility to provide the necessary harmonic filters to bring the installation into compliance." This means the Company and its Contractor must seek out the answers.

The Company cannot plead innocent to the ongoing power issues since they stated "From 2002 forward Diamond Bar Estates has been at the receiving end of inconsistent, unbalanced as well

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as underpowered service from Kootenai Electric Co-op” in Request 11 of Case No. DIA-W-15-01. The Company should have addressed this issue with qualified experts long before the 7 pump replacements over a period of 13 years and this should not be chargeable to the rate base.

Question 2. The AEI engineering report recommends that a soft start be installed at the pump, yet no such equipment has been installed to date. What is Diamond Bar’s understanding with respect to the need for soft start equipment at the pump to prevent additional motor failures? Is it Diamond Bar’s belief that soft start equipment at the pump for 2002 forward would not have prevented motor failure? Please explain.

Response 2. The failures occurred while the motor was running, so it the Company’s and the Contractor’s belief a Soft Starter would not have prevented motor failure.

Comment 2.

Again, the AEI engineering report states under Recommended actions to improve system protection Item 5 to “Replace the FVNR across-the-line starter serving the well pump with a solid state soft starter.” Item 5a further states “The soft starter will not only be less stressful on the electrical system (reduced inrush current) and pump motor but will also provide a higher level of protection to the motor while running.”

AEI are the qualified experts for this evaluation and their guidelines should be implemented by the Company without the ongoing resistance and excuses that are in direct opposition to the report recommendations and KEC mandatory requirements. Discounting their own experts as they did in the 5/27/16 Reply Comments under Soft Start for the Pump stating “The Company does not have the funds to install this device, and is not sure it is needed because the system seems to be working well” is contrary to the AEI engineering report, the KEC requirements and the undeniable empirical evidence of 7 pump replacements within the lifespan of one pump.

The Company and its Contractor are both responsible for meeting the requirements of each jurisdiction including KEC before making improvements or upgrades to their system just like any other business, developer or individual. If they had properly reviewed the requirements before any or each of the pump failures over the last 13 years, they would undoubtedly have avoided the accelerating pump failures of nearly 1 per year. The rate base should not be held liable for this lack of basic procedure over such a long period of time nor resist the recommended fixes.

Question 3. Did Diamond Bar or its pump contractor ever inform Kootenai Electric of the increase in pump size from 50 hp to 60 hp in 2004? Please explain.

Response 3. The Company nor the Contractor informed KEC of the increase in motor size from 50hp to 60hp, however, their own monitoring report reflects the original transformers were handling the load. See attached Exhibit 1

Comment 3.

In Exhibit 6 of the 2/16/16 Reply to First Production Request, H2O Well Service Inc. stated a 50 hp pump was excessive for the reservoir capacity and recommended a 25 hp pump that “is not a Volkswagen, and should meet the needs of the system adequately”. We still lack a reasonable explanation for the increase from a 50 hp to a 60 hp in 2004 and all of the subsequent 60 hp pumps that were replaced in “2010, 2012, 2014, and twice in 2015” per the PUC Staff Report.

Again, the Company and its Contractor are both responsible for meeting all requirements and hiring qualified experts when any significant changes are made to a system to ensure safety and reliability over the lifespan of the equipment. To do any less would be inviting costly and unsafe operations that have indeed been painfully demonstrated. Until the AEI engineering report in 2015 there was never a serious attempt to resolve an obviously poor electrical system that was known to have issues as early as 2002.

The larger 60 hp pumps may be more efficient with their newer electronic components and lighter materials; however, they are not designed to operate like an old, inefficient farm pump with marginal electrical service, poor grounding and inadequate protection. If something keeps breaking and you replace it with the same thing how can you ever expect a different outcome? Once the insurance coverage runs out, the rate base should not be treated as the bailout bank.

The pump size was increased in 2004 and the little transformer capacity graph in Exhibit 1 of the Company Response was done in 2015 after another 5 pump failures over 11 years. Then, after claiming the transformers are correctly sized in July 2015, KEC upgraded the site with a pad mounted transformer in October 2015 worth over \$17,000 as recommended in the AEI report per Exhibit 11f. It's obvious AEI are the experts and the other attempts are minimal.

Question 4. Prior to the AEI report in 2015, did Diamond Bar ever hire a certified electrician to assess the electrical equipment at the pump, including grounding, transformer adequacy, surge protection and conductors as a result of motor failure? If so, please list service providers and any reports provided. If not, why not?

Response 4. Yes, our Contractor (UCPD) is a fully licensed and bonded electrical contractor in ID and WA who specializes in pump systems and controls.

Comment 4.

So, prior to the AEI report in 2015, the Company nor its Contractor bothered to “assess the electrical equipment at the pump, including grounding, transformer adequacy, surge protection and conductors as a result of motor failure” and have no ability to “list service providers and any reports” that would answer over 13 years of electrical problems. After losing insurance coverage, the resulting financial damage this has caused should not be borne by the rate base.

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Question 5. Based on available information, what does Diamond Bar believe was the root cause of the multiple pump motor failures between 2002 and 2015? Please provide support for the Company's position with references to any written repair recommendations, investigative reports or other written analysis.

Response 5. The Company experienced multiple motor failures which each failure was dealt with on a case by case basis and multiple agencies were consulted with each failure. The agencies Franklin Pump Motor, our Contractor (UCPD), and KEC were consulted, however, the Electric Coop in most cases failed to offer much in resolving the issue until the Company hired a Professional Engineering Firm who stated in their Observation Report, The current utility transformers are under sized. The Company understands AEI did not pin point the failure reason exactly, however, following the installation of larger pad transformers it currently appears to the Company this was the biggest resolve to the failures.

Comment 5.

The question asked to "provide support for the Company's position with references to any written repair recommendations, investigative reports or other written analysis" for which none was provided in the Company Response. The 2015 AEI engineering report stands as the ONLY documented analysis completed by a qualified expert after more than 13 years with 7 expensive pump failures within less than the lifespan of one properly installed pump.

Clearly, the AEI engineering report is the key document in resolving the ongoing electrical issues at this facility. Every recommendation should be fully implemented from the report and not just selective items here and there with the hope that it will somehow work for the next 18 years.

We can excuse the first pump failure in 2002 as an anomaly, but not after replacing the pump with a bigger 60 hp model two years later in 2004 without the proper coordination, without following current requirements and without hiring an expert to access the root problem and then compounding the electrical problems with an uninformed pump size upgrade.

Following obvious issues in 2002 and 2004, the string of annual pump failures in "2010, 2012, 2014, and twice in 2015" per the PUC Staff Report is just unacceptable and almost breathtaking in the level of incompetence by not seeking an expert opinion until after the 3rd, 4th, 5th, 6th and finally 7th pump failure in 2015.

Conclusions & Recommendations:

To clearly state our position, we take exception to the Staff Report that these replacements are "significant investments in this water system" and "Staff's proposed treatment recognizes the unique circumstances that required multiple replacement" and "Staff therefore recommends an amortization period of 18 years" to be paid in the rate base. This is unacceptable!

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Our attorney, Susan P. Weeks with James, Vernon & Weeks, also appears to take exception to this approach in the legal opinion we requested in this case. As she stated that “much of the requested increase is coming as a result of increased maintenance costs for replacement of defective water pumps, which are arguably the result of negligence in installation or operation” she anticipates “the Commission likely will not allow the Company to include the maintenance charges in its rate base.” She points out that if “Diamond Bar Estates Homeowners Association can show the cost of replacement of the water pumps has increased as a result of negligence in installation, maintenance, or the like, it would be inappropriate for the Commission to include that charge in rate base calculations. An increase in rate base charges to compensate for water pump replacement, in that situation, would be unreasonable.”

Again, the Staff Report states “Under normal accounting treatment upon the early retirement of an asset, the remaining book value would be written off as an extraordinary loss and would not be recoverable in rates” and we strongly urge the Commissioners to enforce this.

We appreciate the additional time and effort expended by the Idaho PUC Commissioners and Staff to properly research and evaluate the details in this case to ensure an informed decision.

Diamond Bar Estates Homeowners Association
Water Rates Committee

Darrel Ramus, Director
Mike Tillery, Director
Glenn Fetter, Director
Eric Hallgren, Committee Member
Nate Simmons, Committee Member