Exhibit No. _____
Issue: Company Background, Improvements, Auditing and Tax Preparation Fees, Capital Structure, Cost of Capital, Rate Case Expense
Witness: Josiah Cox
Type of Exhibit: Direct Testimony
Sponsoring Party: Indian Hills
Case No.: WR-2017-0259
Date: October 13, 2017

Missouri Public Service Commission

Direct Testimony

of

Josiah Cox

On Behalf of

Indian Hills Utility Operating Company, Inc.

October 13, 2017

IH Exhibit No. 1 NP
Date 11-27-17 Reporter KF
File No WR-2017-0259

NP

AFFIDAVIT

STATE OF MISSOURI)
) ss
COUNTY OF St Charles)

I, Josiah Cox, state that I am the President of Indian Hills Utility Operating Company, Inc. and, that the answers to the questions posed in the attached Direct Testimony are true to the best of my knowledge, information and belief.

Subscribed and sworn to before me this 13th day of October, 2017.

Notary Public

My Commission Expires: 01/31/2021

BRENDA EAVES
Notary Public, Notary Seal
State of Missouri
St Charles County
Commission # 13443468
My Commission Expires 01-31-2021

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DIRECT TESTIMONY OF
JOSIAH COX
INDIAN HILLS UTILITY OPERATING COMPANY, INC.

WITNESS INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Josiah Cox. My business address is 500 Northwest Plaza Drive Suite 500. St. Ann MO, 63074

Q. WHAT IS YOUR POSITION WITH INDIAN HILLS UTILITY OPERATING COMPANY, INC. (INDIAN HILLS OR COMPANY)?

A. I hold the office of President of Indian Hills and Central States Water Resources, Inc.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL EXPERIENCE.

A. I received a Bachelor of Science with a major in Environmental Science from the University of Kansas. After graduation and a brief tenure at the Kansas Biological Survey, I was employed by Fribis Engineering, a Civil Engineering Firm in Arnold, MO. I spent approximately two and a half years working with Fribis Engineering. I was involved during that time in various facets of the land development process to include permitting, entitlement, civil design, project management, and construction management. I focused mainly on the water and wastewater side of the civil engineering business and participated in every part of the civil business from wasteload allocation studies (now known as the anti-

degradation processes), design, permitting, project management, and construction management. I also ran the environmental consulting division and was the second private consultant to submit a water quality impact study in the state of Missouri in 2003. At Fribis Engineering, I joined the executive leadership team and helped run all of the operations of the firm. Thereafter, in 2005, I raised money from a group of investors and formed Trumpet LLC. Trumpet LLC was a full service civil engineering, environmental consulting, general contracting, and construction management firm. In early 2006, I started the Executive Masters of Business Administration (MBA) program at Washington University in St. Louis. I graduated with my MBA from Washington University in the 2007. At Trumpet LLC, as the Chief Operating Officer and finally Chief Executive Officer, I obtained extensive experience with rural communities in every facet of the water and wastewater compliance process including environmental assessment, permitting, design, construction, operation and community administration of the actual water and wastewater (sewerage) systems. At Trumpet, we performed stream sampling and built waste-load allocation models to determine receiving water-body protective permit-able effluent pollutant loads. We have done full engineering design of multiple whole community wastewater and water infrastructure systems including wells, water distribution, water treatment, water storage, wastewater conveyance, and wastewater treatment plants and taken these designs through federal and state administered permitting processes in Missouri. Trumpet also administered the construction of these water and wastewater systems from green field site selection all the way through system

startup and final engineering sign off. In 2008, I took over the operations on an existing rural sewer district and I still currently operate a system actually managing the functioning, testing, and maintenance of the system. Finally, I also act as the administrator for this system performing all the billing, emergency response, accounts payable / accounts receivable, collections, budgeting, customer service, and public town meetings required to service the community.

Q. PLEASE DESCRIBE YOUR POSITION AT CENTRAL STATES WATER RESOURCES, INC.

A. I have been the President of Central States Water Resources, Inc. (CSWR), which manages First Round CSWR, LLC (First Round), for approximately three and a half years. First Round, though its subsidiaries, has completed four acquisition and financing cases with the Missouri Public Service Commission (Commission) and two rate cases with the Commission.

Q. WHAT IS THIS ORGANIZATION'S BUSINESS PLAN?

A. The plan is to pursue the purchase and recapitalization of failing water and wastewater utilities across the state of Missouri under the regulated utility small rate case technical format. As an example of market size and future plans, Central States estimates there to be 65 PSC regulated small sewer and/or water companies in Missouri (Central States defines small sewer companies as sewer companies servicing under 8,000 customers by firms that are not publically traded). Out of those 65 small companies at least 7 are currently in state appointed receivership and in the immediate danger of being closed down for Missouri Department of Natural Resources (MDNR) regulatory reasons. The

average tariff rate (individual customer utility rate approved by the Commission) in the remaining 58 systems has not been changed for approximately 10 years. This means most of the Commission-regulated small sewer and/or water companies in the state have not been in a rate case for over a decade. Based on recent regulatory permit changes, Central States estimates at least 27 of the entire 58 non-receivership regulated small sewer and/or water companies are currently out of, or about to be out of, federal and state regulatory pollution or dispense permit compliance. As the vast majority of permitted water and sewer operations in the state are unregulated, these 32 targets (receiver and regulatorily distressed) are just a small portion of the potential Central States utility targets in Missouri.

Q. WHAT IS FIRST ROUND'S EXPERIENCE WITH WASTEWATER/SEWER SYSTEMS?

A. On the wastewater side of the business, First Round has purchased five wastewater treatment plants (WWTP) with associated sewer pumping stations, gravity force mains, and gravity conveyance lines. The companies have designed, permitted, and completed construction, with Missouri Department of Natural Resources approval, of approximately $2.4 million of sanitary sewer systems since March of 2015. These improvements include wastewater line repairs to remove infiltration and inflow, building sewer main extensions, the repair of multiple lift stations, the construction of lift stations, the closure of an existing regulatory impaired WWTP, building two fully activated sludge plants, constructing two moving bed bio-reactor plants (MBBR), converting two failing

WWTP's into sludge storage/flow equalization and treatment basins, and constructing various other wastewater supporting improvements. Central States has also completed the design and construction permitting for major wastewater improvements for the two wastewater systems, which are the subject of the recently approved Elm Hills Utility Operating Company, Inc. acquisition case. These designs include improvements to wastewater lines to remove infiltration and inflow, building sewer main extensions, the repair of multiple lift stations, building an internal nutrient removal reactor to an activated sludge plant, constructing a moving bed bio-reactor plant (MBBR), converting one failing WWTP's tankage into sludge storage/flow equalization and treatment basin, and constructing various other wastewater supporting improvements.

Q. WHAT IS FIRST ROUND'S EXPERIENCE WITH WATER SYSTEMS?

A. On the drinking water side of the business, the companies have designed, permitted, and has completed construction with Missouri Department of Natural Resources approval of approximately $2.6 million of drinking water systems since March of 2015. These improvements include construction of three new ground water storage tanks, construction of three sets of drinking water pressurization pump assemblies, drilling a deep water well, erecting two new well-houses, closing two failed well-houses, closing an exposed failed deep water drinking well, rehabbing an existing impaired well-house, closing a failing booster pump station house, replacement of over 700 meter pits with new meters, replacement of numerous existing water service lines, installing numerous isolation valve systems, installing multiple flush hydrants, repairing

almost hundreds of leaks and repairing or building various other supporting drinking water system improvements. Central States has also completed the design and construction permitting for another water improvement project associated with the recently approved Elm Hills Utility Operating Company, Inc. acquisition of the water assets of Missouri Utilities.

Q. HAS YOUR ORGANIZATION BEEN ASKED BY THE COMMISSION STAFF TO ASSIST WITH ANY OTHER SYSTEMS?

A. Yes. In the spring of 2017, at the request of the Commission water and sewer staff, we negotiated a purchase contract and immediate operations takeover of Smithview H2O Company, a Commission-regulated drinking water system. Thereafter, we were able to get Smithview off a MDNR mandated emergency boil order. Since March of 2017, the organization has invested over $59,000 in disinfection system installation, emergency line repairs, emergency electrical repairs, and operational services to keep Smithview operating and off a potential MDNR mandated boil order.

Q. HAS THE ORGANIZATION TAKEN STEPS TO IMPROVE SERVICES AT THE SYSTEMS IT NOW OPERATES?

A. Yes. In addition to the capital improvements made on all of the systems, the organization has built from scratch customer service systems at each utility that comply with the Commission's Chapter 13 rules and provide benefits to the customers. This includes 24hr emergency service phone lines for potential service issues, on-call emergency service contractor personnel, customer dissemination of MDNR mandated drinking water testing information, on-line bill-

pay options, up-to-date website bulletins about current service status, and service initiation or discontinuance procedures that are Commission compliant.

Q. DOES CSWR/FIRST ROUND PLAN TO MAKE ADDITIONAL ACQUISITIONS?

A. Yes. CSWR is in various phases of due-diligence on numerous other small, failing water and wastewater utilities across the state of Missouri. Most recently, as mentioned above, a CSWR managed utility, Elm Hills Utility Operating Company, Inc. has Commission approval to purchase two wastewater systems, and one water system (the water system and one sewer system (Missouri Utilities Company) have been in Missouri state-appointed receivership for ten years and has AG enforcement actions pending). This is a good example of the type of systems CSWR is currently working on.

Another CSWR managed utility has contracts with approximately ten water and wastewater systems, which contain four wastewater systems currently in state appointed receivership, one water system in receivership (with an active attorney general enforcement action), and two non-regulated wastewater systems in attorney general enforcement actions. These transactions will be presented to the Commission in the near future.

PARTIAL DISPOSITION

Q. HAS INDIAN HILLS BEEN ABLE TO REACH AGREEMENT IN REGARD TO ANY RATE CASE ISSUES?

A. A few. On September 1, 2017, the Staff of the Public Service Commission filed a Partial Disposition Agreement, which addressed many rate case issues.

Q. IS IT YOUR UNDERSTANDING THAT THE STAFF WILL FILE DIRECT TESTIMONY IN SUPPORT OF THAT PARTIAL DISPOSITION AGREEMENT?

A. Yes.

PURPOSE

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. I will first provide the Missouri Public Service Commission (Commission) with a description of Indian Hills and its operations. I will further describe the improvements that have been made to the water systems owned by Indian Hills. I will then provide testimony concerning certain issues that were not included in the agreement with the Staff. Those issues are as follows: (1) Repair Expense; (2) Auditing Expense; (3) Tax Preparation Expense; (4) Rate of Return; (5) Debt Cost; (6) Corporate Allocations, and (7) Capital Structure.

It is my understanding that the Office of the Public Counsel (Public Counsel) will identify additional issues it wishes to raise in this case. Indian Hills will address those issues in its rebuttal testimony.

Q. WHICH OF THE ABOVE ISSUES WILL YOU ADDRESS?

A. Auditing Expense, Tax Preparation Expense, and Capital Structure.

Q. WHO WILL ADDRESS THE OTHER ISSUES?

A. Dylan D'Ascendis will address Rate of Return; Mike Thamon will address Debt Costs; Todd Thomas will address Maintenance Expense and the Payroll Component of Corporate Allocations; and, Phil Macias will address Repair Expense, Auditing Expense, Tax Preparation Expense, and Corporate Allocations

INDIAN HILLS BACKGROUND

Q. PLEASE DESCRIBE INDIAN HILLS.

A. Indian Hills provides water service to approximately 715 residential customers through a booster pump station energized water system serviced by two wells, two ground water storage tanks and a distribution system located near Cuba, Missouri.

Q. IS INDIAN HILLS A PART OF A LARGER ORGANIZATION?

A. Yes. As discussed above, First Round CSWR, LLC is Indian Hills' ultimate parent company. Central States Water Resources, Inc. is the manager for First Round CSWR, LLC. I commonly refer to the entire business organization as a whole by the name "Central States" or "CSWR."

Q. DOES INDIAN HILLS HAVE ANY OF ITS OWN EMPLOYEES?

A. No.

Q. HOW DOES IT PROVIDE SERVICE?

A. Indian Hills hired a local third-party Operations and Maintenance (O&M) firm that carries the mandatory MDNR licenses and appropriate insurance to manage the daily water operations. The O&M firm has a 24-hour emergency service line for service disruption services that forwards all service issues to myself as president of Central States and Todd Thomas as senior vice president of Central States. Indian Hills also hired a billing and customer service firm to send out bills and handle customer service related to billing questions. Moreover, Indian Hills has setup an online billing system to receive credit card and e-checks and customer service email accounts specific to Indian Hills to field on-going customer interactions.

All of the management, financial reporting, underground utility safety and location services, Commission regulatory reporting, MDNR regulatory reporting, environmental management, operations oversight, utility asset planning, engineering planning, on-going utility maintenance, total utility record keeping, and final customer dispute management is done out of the corporate office with proportional costs passed down to Indian Hills.

OWNERSHIP AND IMPROVEMENT OF SYSTEMS

Q. HOW DID INDIAN HILLS ACQUIRE ITS WATER SYSTEM?

A. Indian Hills acquired its water system from I.H. Utilities, Inc., which was a public utility regulated by the Commission. The Commission provided approval of this transaction in its File No. WO-2016-0045.

Q. WHAT APPROVAL DID INDIAN HILLS SEEK FROM THE COMMISSION IN FILE NO. WO-2016-0045?

A. Indian Hills sought the Commission's permission to acquire the water assets of I.H. Utilities, Inc., and to issue indebtedness and to encumber those acquired assets in order to fund the construction necessary to bring the system into regulatory compliance. Indian Hills's proposed financing was examined by the participants in that case. Ultimately, a Stipulation was reached and the Commission approved the transactions, with conditions, by its Order Regarding Stipulation and Agreement and Certificate of Convenience and Necessity issued February 3, 2016, effective March 4, 2016.

Q. ON WHAT DATE DID INDIAN HILLS CLOSE ON THESE TRANSACTIONS?

A. The transfer that was the subject of Case No. WO-2016-0045, was completed on March 31, 2016.

Q. WHAT WAS THE CONDITION OF THE I.H. UTILITIES, INC. WATER SYSTEM WHEN IT WAS ACQUIRED BY INDIAN HILLS?

A. The original Indian Hills drinking water system was constructed approximately fifty years ago. Indian Hills does not believe any major capital improvements were completed after the initial construction was completed. The original system was in a state of significant disrepair that centered around six major enforcement issues or schedules of compliance associated with the system's existing operation at the time Indian Hills bought the water assets.

Q. WHAT WAS THE FIRST ISSUE?

A. The first issue was that I.H. Utilities had only one well in service. For drinking water systems serving over fifty homes, MDNR's design guides require two drinking water wells. I.H. Utilities lost the ability to run one of its drinking water wells sometime in the past and was functioning with only one well. The existing well house posed a major safety hazard with exposed electrical wiring with leaking indoor piping, a building that had been subject to fire damage from a lightning strike, and existing buried water tanks that had been significantly corroded over time. The second nonfunctioning well was housed in a dilapidated shack with mold, lack of lighting, and a lack of basic system security.

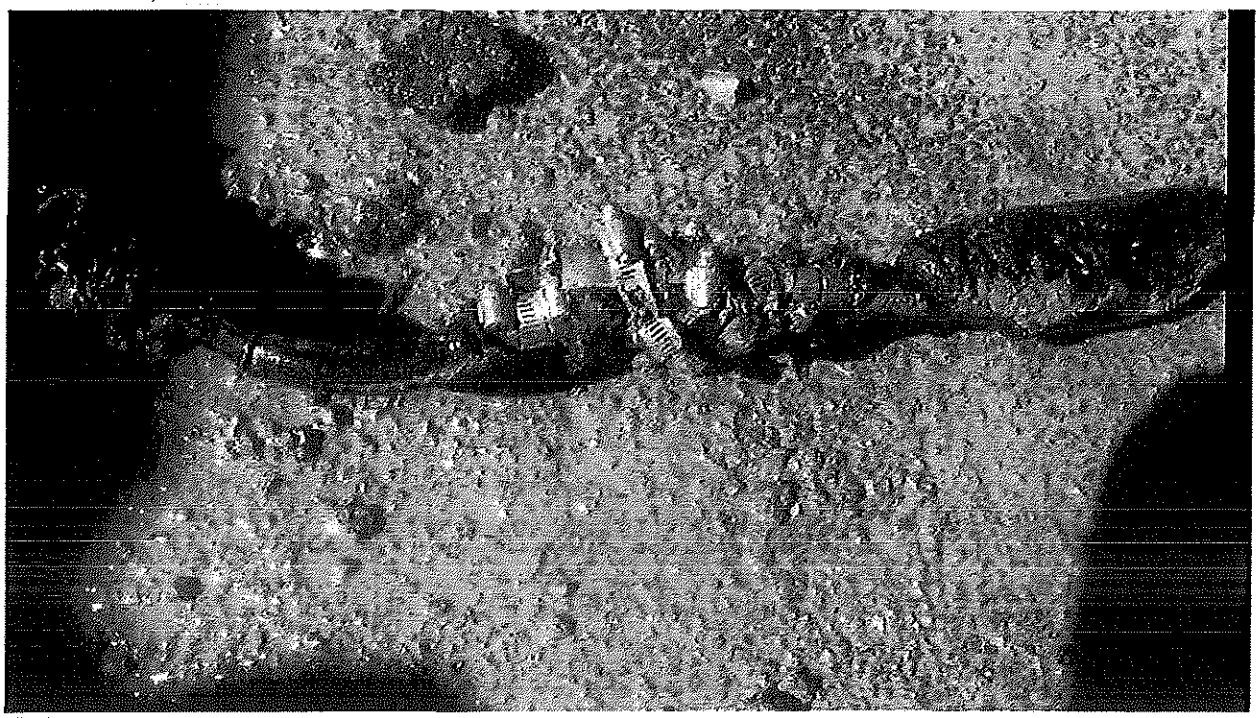
Q. WHAT WAS THE SECOND ISSUE?

A. The second major set of issues related to system reliability. At the time of acquisition, there was no backup power or backup pumping system, nor was there adequate on-site drinking water storage. The existing storage tank was less than 20,000 gallons, and it was partially buried and badly corroded. In emergency situations the system would run out of water due to a lack of pressure. This system was out of compliance for water emergency service reliability.

Q. WHAT WAS THE THIRD ISSUE?

A. The third major issue was water loss inside the system. MDNR drinking water guides state that water loss inside a drinking water conveyance system should not exceed ten percent of total water extracted from wells. I.H. Utilities was losing about 75% of all the water pumped to leakage from the existing water conveyance lines. This water loss was associated with a water main conveyance

system that is made out of piping that is half the thickness required by the National Science Foundation (NSF) for drinking water applications, piping that varies in size, without design logic, from 3-inch pipe to - inch pipe across the entire 16+ miles of distribution system. The original connection piping from the water mains to the water meters and from the meters to the houses consists of plastic roll piping commonly used in lawn irrigation (a non-NSF approved application for drinking water). Below is a picture showing the existing connection piping with multiple hose clamps that partially illustrates part of the reason why the I.H. water loss was so high.



Q. WHAT WAS THE FOURTH ISSUE?

A. The fourth major issue was system water pressure. MDNR current design guides require a minimum of 21 psi of water pressure, with a guideline of 35 psi for residential drinking water systems. The minimum of 21 psi is critical as that energizes water lines to prevent outside contaminants entering water lines and endangering human health. That is why a boil order is required when pressure falls below this level. During peak usage times at the Indian Hills Lake, customers on the back side of the lake would not have any water pressure, violating minimum MDNR standards, and endangering residents' health. At the time of acquisition, Indian Hills registered a maximum of 20 psi at the back of the lake community and, as stated previously, during peak usage no water pressure at all. This suggests the I.H. system should have been on a MDNR mandated boil water order for some time.

Q. WHAT WAS THE FIFTH ISSUE?

A. The fifth major issue concerned the booster pumps. Water systems utilize booster pumps for system pressure. MDNR requires redundant pumps at every booster station to ensure system reliability. The original tank and booster station only had one pump, putting the entire system at risk for total system failure.

Q. WHAT WAS THE SIXTH ISSUE?

A. The sixth major issue concerned the MDNR requirement for nominal storage equal to or greater than one day's average usage. Indian Hills fluctuates from 80,000 gallons per day in the winter period to just over 270,000 gallons per day in the summer and around holidays. Average usage for the year is around 125,000 gallons per day, while in the summer months it averages around

180,000 gallons. MDNR typically states that they will not approve a storage tank that does not provide at least 1.5 times the average daily flow. With that being said, MDNR required using the summer peak months of July through September which averages just under 180,000 gallons. This equates to 270,000 gallons after the 1.5 multiplier required by MDNR. At the time of acquisition, I.H. had a tank with less than 20,000 gallons of storage, or only four hours of water service during peak summer season usage.

Q. WAS INDIAN HILLS' SYSTEM OUT OF COMPLIANCE WITH MDNR IN REGARD TO THE WATER SYSTEM?

A. Yes. Indian Hills had a list of twenty-seven (27) MDNR compliance issues:

1-The public water system failed to conduct daily monitoring of chlorine residual levels within the public water system's distribution system. Daily testing of chlorine residuals within the public water system's distribution system insures that chlorine levels are maintained to eliminate contaminants within the water system;

2-The public water system did not have a stand-by chief operator to operate and maintain the drinking water system in the event that the chief operator is unavailable or incapacitated;

3-The public water system did not have an up-to-date coliform site sample plan in accordance with Missouri Public Drinking Water Commission;

4-The public water system did not develop a Disinfection by-product (DBP) monitoring plan in accordance with Missouri Public Drinking Water Commission;

5- The public water system did not have a lead ban user's agreement;

6- The public water system was in violation of Missouri Safe Drinking Commission Regulation 10 CSR 60-9.010 which establishes requirements for maintaining public water system records;

7-Lack of a backup well and emergency power;

8-The master meter for Well # I was not being read;

9-A sample tap was not provided for collecting samples at the well prior to any chemical treatment for Well #1;

10-The well's drawdown gauge was not being utilized to measure for static water level(s) and pumping water level;

11-Corrosion was observed on the surface of the well casing, wellhead and piping;

12- Poor housekeeping was observed in the well houses at both wells;

13-The public water system did not have a cross-connection control plan in accordance with Missouri Public Drinking Water Commission regulation 10 CSR 60-11_Q10;

14-Low pressure inside the system;

15-The public water system did not have an up-to-date distribution map;

16- The public water system did not have a program for not did it practice routine unidirectional water main flushing;

17- The public water system did not have sufficient water storage for the current population;

18-The public water system did not have the most recent water storage facility's inspection and/or repairs reports and the pubic water system did not have any

records of the 5,000-gallon pressure tank ever being inspected by a professional tank inspector;

19-The water storage facilities were only partially housed. The back 90% of the water storage facilities were buried and not protected by a building;

20- Corrosion was observed on the surface of the water storage facilities exterior surfaces and related components housed within the well house;

21- The public water system had only one (1) chemical feeder and a repair kit for this feeder. Standby or redundant disinfection facilities were not provided;

22- The ventilation piping for the chlorine solution tank was not screened.

23-There was no emergency notification system for the failure of a critical pressure booster pump(s);

24-The public water system has only one (1) booster pump available at each well/storage facility for pressure regulation;

25- There was no lighting within the pump house for safety or for routine inspection and maintenance at the Highway DD Booster Pump Station;

26-There was no heating or adequate ventilation for the original Highway D Booster Pump Station; and,

27-The building walls for the pump house at Highway DD Booster Pump Station were rotting and falling down.

Q. WAS INDIAN HILLS REQUIRED TO MAKE CERTAIN IMPROVEMENTS WHEN IT ACQUIRED THE SYSTEM?

A. Yes. Attached as **Schedule JC-01** is the MDNR inspection letter for the IH Utilities system.

Q. WAS THE NECESSITY OF THE IMPROVEMENTS TO THE WATER SYSTEM KNOWN AT THE TIME INDIAN HILLS RECEIVED APPROVAL OF THE TRANSACTION IN FILE NO. WO-2016-0045?

A. Yes. The Application, as well as other documents in that matter, described the issues, the planned improvements, and the cost of those improvements. Indian Hills provided the Commission Staff with copies of MDNR inspection letters, engineering estimates and technology selections associated with the required improvements. Additionally, in the acquisition case, Indian Hills proposed a financing plan/transaction related to the improvements that was approved by the Commission.

Q. DID INDIAN HILLS MOVE FORWARD WITH IMPROVEMENTS TO THE INDIAN HILLS SYSTEM?

A. Yes. Indian Hills began construction on the wastewater improvements approximately 30 days after it acquired systems.

Q. WHAT IMPROVEMENTS WERE MADE TO THE SYSTEM?

A. The following improvements and construction were completed:

- The existing well one house had to be demolished. An entire new well house was built. The new well house had a separate room for disinfection equipment in order to protect equipment from corrosion.

- The existing deep water well was converted into a pitiless well in a yard to allow for direct work via heavy equipment in emergency situations. This pit-less well is properly sealed and protected.
- Piping was run from the well through the main well house where a magnetic meter and testing tap were installed to meet MDNR requirements for well production measurement and direct well water testing.
- The piping was then run through the sperate disinfection room which has properly constructed ventilation where chlorine is added. The chlorine is added via chlorine pumps with redundant pumping to meet MDNR requirements for emergency service.
- The piping then feeds the new 270,000 ground storage tank which allows for mandatory chlorine contract time of the water post disinfection.
- The new piping then runs from the ground storage tank back into the main building where a chlorine analyzer maintains constant reading to ensure MDNR required residual disinfection is maintained in the drinking water.
- The water is then fed through dual (required by MDNR for system stability) variable frequency drive booster stations and forced into the water distribution system to maintain pressure.
- A backup generator was installed behind the building on a concrete structure to provide emergency power per MDNR requirement for system stability.
- Remote monitoring equipment feeds information on the well production, chlorine addition, chlorine residuals, amount of water pumped into the system, and status of the backup generator.

- The old non-functioning well was plugged to MDNR standards, and a new well drilled on the west side of the lake.
- Since the existing water distribution system is made up of random, substandard, variable pipe sizes running from 3 inches to 6 inches it was not possible to ensure minimum MDNR water pressure due to friction loss across the distribution system via one booster station. In addition, a single booster station and ground storage tank could not provide drinking water volumes during peak lake water use in the summer. To meet these requirements, a new approximately 500-foot deep water well was drilled to meet MDNR requirements for source redundancy. This well was built in a pit-less configuration as well.
- A well house servicing the new well was constructed almost exactly like Well # 1. Piping was run from well two through the main well house where a magnetic meter and testing tap were installed. The piping then runs through the sperate disinfection room which has properly constructed ventilation where chlorine is added. The chlorine is added via chlorine pumps with redundant pumping. The piping then feeds a new 50,000 ground storage tank which allows for mandatory chlorine contract time of the water post disinfection and peak water storage. New piping then runs from the ground storage tank back into the main building where a chlorine analyzer maintains constant reading to ensure residual disinfection is maintained in the drinking water. The water is then feed through dual variable frequency drive booster stations and forced into the water distribution system to maintain pressure to

the back side of the lake. Remote monitoring equipment feeds information on the well production, chlorine addtion, chlorine residuals, amount of water pumped into the system.

- After closing on the system, it was determined that the previous owner had not done meter reading for years. The original meter pits were made of compressed cardboard and were disintegrating in the ground and the meters had failed. Every house and lot (725) had new drinking water grade HDPE meter pits and new remote electronic meters installed. In addtion to the on-going repairs of lines, approximately 50 water taps have been replaced.

Q. WHEN WERE THESE IMPROVEMENTS COMPLETED?

A. The improvements were completed by February of 2017.

Q. **DID THE MISSOURI DEPARTMENT OF NATURAL RESOURCES INSPECT AND ACCPET THE IMPROVEMENTS?**

A. Yes. The major improvements were inspected and accepted by MDNR in 2016. A copy of the acceptance letter is attached hereto as **Schedule JC-02**.

Q. WHAT WAS INDIAN HILLS' INVESTMENT IN THE NEW FACILITIES?

A. Indian Hills has invested approximately $1.84MM in the facilities.

EXISTING RATES

Q. WHAT ARE THE EXISTING RATES FOR THE SYSTEMS AND WHEN WERE THESE RATES ESTABLISHED?

A. The current rates are as follows:

- A $10.81 base rate, which includes 4,000 gallons of use; and,

- a volumetric rate of $1.89 for every 1,000 gallons used over the original 4,000 gallons. These rates became effective October 27, 2009.

Q. HOW WAS THIS RATE CASE INITIATED?

A. Indian Hills initiated this small company rate case by its letter to the Commission dated March 31, 2017.

Q. WILL THE RATES REQUESTED BY THE COMPANY RESULT IN A SUBSTANTIAL INCREASE FOR THE INDIAN HILLS CUSTOMERS?

A. Yes, they will. The water system required a substantial rebuild (which is still underway, to some extent) to: (1) to be operational for the provision of service to the customers; and, (2) to comply with federal and state regulations related to those services.

AUDITING AND INCOME TAX PREPARATION FEES

Q. WHAT DISAGREEMENT DOES INDIAN HILLS HAVE WITH THE COMMISSION STAFF IN REGARD TO AUDITING AND TAX PREPARATION FEES?

A. The Staff has not included the direct audit and tax preparation fees for Indian Hills, or Indian Hills' pro-rata share of tax and audit fees from Central States.

Q. ARE THESE AMOUNTS THAT ARE CURRENTLY BEING PAID?

A. Yes, they have been paid. Attached hereto as **Schedule JC-03 Confidential** are the final invoices for tax and audit fees associated with Indian Hills and First Round CSWR, LLC.

Q. DID THE COMPANY TAKE ANY STEPS TO MINIMIZE ITS AUDITING AND TAX PREPARATION FEES?

A. Yes. The Company issued requests for proposals (RFP) and circulated those RFP's to a variety of accountants and accounting firms in order to determine the least expensive qualified firm for rate making purposes.

Q. WHAT WAS THE LOWEST COST FOR THESE SERVICES INDIAN HILLS FOUND THROUGH THE RFP PROCESS?

A. The lowest price was provided by Mueller Prost.

Q. WHAT IS INDIAN HILLS' ANNUAL SHARE OF THOSE COSTS?

A. $21,628.58 which is Indian Hill's direct costs of $14,000 ($10,000, financial audit and $4,000, tax preparation) added to an 18% allocation of CSWR's audit and tax fees of $20,158.76, 18% of which is $3,628.58.

Q. WHY IS IT NECESSARY FOR INDIAN HILLS AND ITS PARENT TO HIRE AN OUTSIDE ACCOUNTANT OR FIRM TO PERFORM THESE SERVICES?

A. One of the major problems facing failing water and sewer companies is a lack of professional management and attention to regulatory and statutory compliance. The former owner of these systems did not correctly file tax forms (resulting in federal tax liens at the time of acquisition), nor did they develop and maintain accurate financial records. Further, every major government funding source for water and wastewater improvements (and in some cases, private funding sources) require audited financials. These government funding groups include USDA Rural Development, The Missouri Clean Water State Revolving Fund, and Missouri Community Development Block Grants. In addition, CSWR has had

recent experience where it was denied equipment financing due to a lack of audited financials for the target utility. Tax preparation and audit fees are a normal course of business for a professionally managed utility. This is particularly important for a utility, or group of utilities, that is actively engaged in attempting to raise capital.

Q. WHAT IS THE APPROPRIATE TREATMENT OF THIS ISSUE?

A. The Commission should order that Indian Hills's share of the actual audit and tax preparation fees be included in its revenue requirement.

CAPITAL STRUCTURE

Q. WHAT DISAGREEMENT DOES INDIAN HILLS HAVE WITH THE COMMISSION STAFF IN REGARD TO CAPITAL STRUCTURE?

A. Instead of using Indian Hills's actual capital structure, Staff has recommended a hypothetical capital structure with a higher equity ratio than is actually being used by Indian Hills.

Q. WHAT IS THE APPROPRIATE TREATMENT OF THE ISSUE?

A. The Commission should use Indian Hills's actual capital structure.

Q. WHY SHOULD THIS BE IMPORTANT TO THE COMMISSION?

A. Central States estimates that almost 50% of the existing regulated small water and/or sewer companies in Missouri are under some type of compliance or regulatory order. Central States has intervened in two regulated water systems, Hillcrest Utility Operating Company, Inc., and now Smithview H2O Company, that were in the midst of boil orders. The Indian Hills Lake Subdivision water system

now before the Commission was only kept out of MDNR major enforcement actions as a result of Central States' acquisition and commitment to make the necessary improvements to bring the water system back into regulatory compliance. I have come across both regulated and un-regulated community utilities across the State that are violating minimum MDNR health and safety standards, creating health risks for residents. In addition to individual health risks, these failing systems are degrading the water quality and environmental stability of the state's rivers and streams.

Q. HOW DOES THIS SITUATION RELATE TO THE APPROPRIATE CAPITAL STRUCTURE?

A. For a utility to invest in basic water and wastewater infrastructure, the regulatory environment must recognize the limited practical options that are available. Actual market conditions dictate what investment criteria are needed to obtain the capital investment necessary to make MDNR-mandated improvements required to bring failing systems back to health, safety, stability, and environmental compliance. Small, failing water and wastewater utilities represent a unique situation.

Q. HOW DOES THIS APPLY TO THE INDIAN HILLS SYSTEM?

A. For perspective, Staff determined that Indian Hills had a net book value of $43,966 at the time of Indian Hills's acquisition case. Indian Hills' net book value versus required MDNR investment dollars represented a 2.5% equity basis. That net book value did not take into account the existing tax liens against I.H. Utilities prior to closing. If the existing tax liens were counted against the utility assets,

the net book value would be $609, or 0.03%, on an equity basis versus the improvements required. The annual reports filed by the previous company suggest that it had an Earnings Before Interest, Tax, and Amortization of less than $32,000 annually. The utility represented a significant commercial liability with existing tax liens, MDNR compliance issues, on-going and past drinking water violations, and an actual public health risk (a lack of minimum system pressure and corresponding boil water notice allowing residents to be potentially exposed to drinking water contaminants). In order to meet minimum MDNR environmental requirements Indian Hills had to invest approximately $1.84 million in a very short time frame -- something that would be required of any entity that attempted to bring these systems into compliance.

Q. DOES REGULATORY LAG ALSO MAKE THIS PROCESS MORE DIFFICULT WHERE A UTILITY HAS NOT HAD NEW RATES SET FOR SOME TIME?

A. Yes. The impact of regulatory lag further makes recognition of Indian Hills' capital actual structure important. For example, Indian Hills began construction on the improvements that are the subject of this case in April of 2016, shortly after it acquired the system. During the time of construction, the direct costs of operating the Indian Hills systems has resulted in a cash loss outside of any overhead allocations of $371,611.66 since 2016. These costs include repair and maintenance of failing water mains and taps, certified operators, customer service and billing, increased power costs, and increased chemical costs.

Q. IS THIS UNUSUAL FOR A SMALL UTILITY IN THIS CONDITION?

A. No. I estimate, based on experience and statutory guidelines, that small, distressed utilities take 3-4 four months of engineering and permitting with MDNR, and 5-6 months of construction. The small rate case format has a target of 11 months from filing to new rates, and a strong preference for actual experience during at least part of an historic test year. This means that from initial expenditures on engineering for MDNR permitting, through construction, then through a rate case, a small distressed water and sewer company can expect to lose money on professional operations and pay for major capital improvements (in Indian Hills's case capital costs are over 40x of existing net book value) for 17-21 months before any cash flow stabilization (new rates). The regulatory lag associated with Indian Hills' 3rd party outside professional certified drinking water operations, critical equipment maintenance, and drinking water infrastructure repairs by the end of September 2017 is 8.5x the rate base of Indian Hills at the time of acquisition. If corporate allocations were also applied, this loss would be even higher.

Q. WHAT IS INDIAN HILLS' ACTUAL CAPITAL STRUCTURE?

A. The Staff and Company stipulation states that the net book value (NBV) of Indian Hills is $1,837,997 outside of AFUDC. Of this NBV, $1,450,000 represents principal on long term debt. Outside of AFUDC, Indian Hills Capital Structure is 21.2% Equity, and 78.8% Debt.

Q. DO THESE CIRCUMSTANCES, THE SIGNIFICANCE OF THE INVESTMENT, AND THE TIME FRAME GIVE AN ACQUIRING COMPANY MANY OPTIONS IN TERMS OF HOW IT ACCESSES CAPITAL?

A. No. The capital structure Indian Hills is utilizing is the only structure that could be found. Moreover, this is the same structure Indian Hills presented to Commission in its acquisition and financing application.

Q. IN YOUR OPINION, WHAT IS NECESSARY FOR INVESTORS TO CONTINUE TO PARTICPATE IN THIS PROCESS?

A. Any potential investor has to have confidence that the actual capital structure required to fix failing water and sewer utilities will be recognized for rate making purposes. This is especially true for systems that are out of regulatory compliance and carrying higher commercial liability risks with lower equity bases.

Q. DOES THE CAPITAL STRUCTURE HAVE AN IMPACT ON ANY OTHER ISSUES?

A. Yes. AFUDC should be calculated based on the actual loan terms, amounts borrowed, and corresponding capital structure associated with the money borrowed by the Company.

RATE CASE EXPENSE

Q. DOES INDIAN HILLS HAVE EXPENSES RELATED DIRECTLY TO THE PROCESSING OF THIS RATE CASE?

A. Yes. Indian Hills has expenses, such as those related to the individual customer notices it provides. It also has incurred attorney and expert witness fees associated with the processing of this case. Indian Hills will provide Staff and OPC with copies of the invoices associated with this case that have been

received thus far. Indian Hills will continue to provide those invoices as they are received in the future.

Q. DOES INDIAN HILLS KNOW WHAT THOSE EXPENSES WILL BE?

A. Not at this time, as the case is far from complete.

Q. WHAT DO YOU PROPOSE IN REGARD TO RATE CASE EXPENSES?

A. The Company is incurring rate case expense in order to bring the matters in dispute before the Commission. These expenses are reasonable. Accordingly, an allowance for rate case expense (normalized over three years) should be included in the revenue requirement in this proceeding that includes invoices of Indian Hills's attorney and expenses related to the rate case (such as those associated with customer notices). The Commission should bring these expenses forward to a date that will allow the majority of costs to be captured in the Commission's order, such as a cut-off date of at least one week after the filing of post-hearing briefs.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Crawford County - PDWB
Indian Hills Utilities
PWS ID # MO-6036052

SCHEDULE JC-01

STATE OF MISSOURI

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

August 25, 2014

CERTIFIED MAIL: 7014 0150 0001 3175 3543
RETURN RECEIPT REQUESTED

Ms. Lois Stanley, Owner
Indian Hills Utilities
2538 Alleghenny
Cuba, MO 65453

Dear Ms. Stanley:

Enclosed is a Compliance and Operation Inspection Report for the community public water system serving Indian Hills Utilities, PWS ID # MO-6036052, Cuba, Crawford County, Missouri. The purpose of the inspection was to determine the public water system's compliance with the Missouri Safe Drinking Water Act and Missouri Public Drinking Water Program regulations. Please direct your attention to the recommendations contained in the enclosed inspection report and provide a written response **within 60 calendar days,** with the exception of Significant Deficiencies, which require a **30 calendar day** response from the date of this certified letter. Your response should be specific in detailing how you intend to correct the problems identified.

Significant Deficiencies were identified during this inspection that requires your immediate attention. The public water system must consult the department's Regional Office **on or before September 24, 2014**, to determine what actions will be taken or have been taken to correct the Significant Deficiencies. Significant deficiencies can be defects in design, operation or maintenance that can cause a failure in the public water system, or have the potential to introduce contamination. Steps must be taken to correct all unsatisfactory features identified in the enclosed inspection report with the designated deadlines. Failure to respond within the designated deadlines stated above is a violation and may lead to enforcement action by the department.

If you have any questions regarding the enclosed inspection report, please feel free to contact Ms. Michelle Oglesby at (573) 368-7344 in the department's Southeast Regional Office's Rolla Satellite Office, 111 Fairgrounds Rd. (P.O. Box 250), Rolla, MO 65401. Thank you for your cooperation to preserve, protect and enhance Missouri's natural, cultural and energy resources.

Sincerely,

SOUTHEAST REGIONAL OFFICE

Jackson L. Bostic
Regional Director

JLB:mol

Enclosure: Compliance and Operation Inspection Report
Photo Attachment
Monthly Chlorine Record Form
How to Select TTHM and HAA Sample Sites

c: Public Drinking Water Branch (electronically)
Mr. Matthew Eaton, 201 East Spencer, Cuba, MO 65453
Public Service Commission, P.O. Box 360, Jefferson City, MO 65101-0360

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MISSOURI DEPARTMENT OF NATURAL RESOURCES
COMPLIANCE AND OPERATION INSPECTION REPORT
COMMUNITY PUBLIC WATER SUPPLY
INDIAN HILLS UTILITIES
PWS ID# 6036052
AUGUST 25, 2014

INTRODUCTION:

On August 20, 2014, a representative of the Missouri Department of Natural Resources' (MDNR) Rolla Satellite Office conducted a Compliance and Operation Inspection of Indian Hills Utilities' public drinking water system. The purpose of the inspection was to determine the system's compliance with the Missouri Safe Drinking Water Act and the Missouri Public Drinking Water Program Regulations. This inspection reviewed all eight (8) critical components of a public water system. Requirements and recommendations to correct deficiencies found during this inspection are outlined as follows.

BRIEF SYSTEM DESCRIPTION:

The Indian Hills Utilities' water system is classified as a community public water system that is in operation throughout the year. This is a primary system which is 100% groundwater and serves a population of 2,500 individuals. The system is comprised of two (2) wells (Well #2 currently is off-line), a 20,000 gallon ground storage tank, a 5,000 gallon pressure tank and a pressure booster pump station. Treatment consists of sodium hypochlorite (liquid Chlorine) injection at Well #1 just before the 20,000 gallon ground storage tank.

Indian Hills Utilities' water treatment is classified at a DS II level of certification for distribution. The operator in charge of treatment and distribution is listed as Mr. Matthew Eaton. Mr. Eaton has a DS II level certification for distribution.

SIGNIFICANT DEFICIENCIES:

1. The public water system failed to perform sufficient operational monitoring to maintain control of the treatment processes as required by Missouri Public Drinking Water Commission regulation 10 CSR 60-4.080.

   The public water system failed to conduct daily monitoring of chlorine residual levels within the public water system's distribution system. Daily testing of chlorine residuals within the public water system's distribution system insures that chlorine levels are maintained to eliminate contaminants within the water system. Total chlorine residuals cannot drop below 0.2 mg/L at the farthest point within the distribution system and cannot be above 4.0 mg/L before the first service connection of the distribution system. A "Monthly Chlorine Record Form" has been included with this inspection report for you to use.

   Within **30 calendar days** please submit a copy of the public water system's chlorine residuals by the 10th of each following month to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, PO Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250. After the department evaluates the chlorine residuals for the initial 90 days, you will be notified if your public water system must continue to submit chlorine residuals to the above office.

   The department requires that Indian Hills Utilities begin performing chlorine level residual testing daily and document these levels within the public water system records.

FINDINGS, COMMENTS, AND RECOMMENDATIONS FOR OTHER DEFICIENCIES:

System Management, Operator Certification, Monitoring and Reporting

1. The public water system does not have a stand-by chief operator to operate and maintain the drinking water system in the event that the chief operator is unavailable or incapacitated.

   This is in violation of Missouri Safe Drinking Water Commission Regulation 10 CSR 60-14.010, which establishes certification requirements for public water system operators. This regulation requires community public water systems to develop a contingency plan for a stand-by chief operator to be available at all times. This may be a second employee certified at the chief operator level, a mutual assistance agreement with a neighboring system, or a pre-arrangement with a contract operator. In some situations multiple backup operators may be required. Sample agreements have been included with this inspection report.

   Within **60 calendar days**, the public water system must submit a plan of action, to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, PO Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250, outlining the public water system's plan to retain services of a stand-by chief operator(s). This plan of action should contain the name(s) of the contracted stand-by chief operator(s), a copy of the work agreement contract and a copy of contracted stand-by chief operator(s) certification certificate; or the name of any individual(s) scheduled dates to attend a certification training course or online course with a planned timeframe for completion to include operator certification testing date(s). For additional information on training courses or operator certification testing dates, please contact the Missouri Department of Natural Resources, Water Protection Program, Operator Certification Section at (800) 361-4827 or (573) 751-1600, P.O. Box 176 (1101 Riverside Dr.), Jefferson City, MO 65102-0176.

   The department requires that Indian Hills Utilities submit a plan of action for obtaining a stand-by chief operator for their public water system within **60 calendar days.**

2. The public water system does not have an up-to-date coliform site sample plan in accordance with Missouri Public Drinking Water Commission regulation 10 CSR 60-4.020(1).

   A public water system must collect total coliform samples according to a written sample siting plan at sites which are representative of the potable water throughout the entire distribution system. Public water systems must identify a minimum of five (5) routine sample locations in different areas of the system. It is recommended that cold water only inside taps be used for sample collection and the well cannot be used for routine sampling points.

   The public water system must enact an appropriate coliform site sample plan and begin rotation of routine samples throughout the distribution system. An example coliform sample siting plan was given to you during this inspection along with a list of sample sites that the department has on record for your public water system. Within **60 calendar days,** the public water system must submit a copy of the coliform site sample plan to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, P.O. Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250.

The department requires that Indian Hills Utilities submit a coliform site sample plan for their public water system within **60 calendar days.**

3. The public water system has not developed a Disinfection by-product (DBP) monitoring plan in accordance with Missouri Public Drinking Water Commission regulation 10 CSR 60-4.090(3).

   Effective January 1, 2004, all community public water systems that add a chemical disinfectant to the water are required to develop, maintain and make available to the department upon request a plan to monitor DBP. A "How to Select TTHM and HAA Sample Sites" document has been included with this inspection report to guide you on how to select and document your DBP monitoring sites. Within **60 calendar days,** the public water system must submit a copy of the coliform site sample plan to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, P.O. Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250.

   The department requires that Indian Hills Utilities submit a DBP monitoring plan for their pubic water system within **60 calendar days.**

4. The public water system is violating Missouri Safe Drinking Water Commission regulation 10 CSR 60 16.010, because the public water system has failed to pay the required primacy fees for calendar year 2011-2013.

   Community public water systems shall submit an annual primacy fee for each active service connection for unmetered and metered customers based on meter size. These fees help to pay for microbiological and chemical testing the department is required to do for public water systems. Missouri is unique in that the department provides testing services for public water systems within the state. Without these fees, each public water system would have to hire their own private laboratories to do the required testing at a much higher cost. Also, each public water system would have to track which/when tests must be done and obtain the appropriate sample containers to collect the samples. The primacy fee is an additional charge to the customer and the public water system is allowed to keep a portion of the primacy fee collected to pay for administrative costs.

   Within **60 calendar days**, the public water system must contact Ms. Tina Stockman at (573) 751-5331 in the Missouri Department of Natural Resources, Water Pollution Program, Fiscal Management Unit, P.O. Box 176 (1101 Riverside Dr.), Jefferson City, MO 65101-0176, to resolve payment of these required annual fees.

   The department requires Indian Hills Utilities to pay annual primacy fees to help pay for the required microbiological and chemical testing required of a public water system.

   NOTE: This office has received an email from Ms. Stockman stating that you have contacted her to pay the 2011 primacy fees and have set up a payment plan for the remaining outstanding primacy fees.

5. The public water system could not locate the lead ban user's agreement at the time of this inspection.

   The Missouri Safe Drinking Water Act (§ RSMo 640.120.7) and Missouri Safe Drinking Water Commission regulation 10 CSR 60-10.040, prohibits the use of lead, or lead-based materials, in the construction or repairs of any public water system. All community public water systems are required to enact a lead ban ordinance/user's agreement so that the public water system may have primacy to protect the water supply. A sample ordinance was given to you at the time of this inspection. The public water system must enact an appropriate lead ban ordinance/ user's agreement and begin enforcement of the ordinance/agreement or provide the department documentation of an ordinance/agreement that the public water system currently holds.

   Within **60 calendar days,** the public water system must submit a copy of lead ban ordinance/ user's agreement to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, P.O. Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250.

   The department requires that Indian Hills Utilities submit a lead ban ordinance/ user's agreement for their public water system within **60 calendar days.**

6. The public water system is in violation of Missouri Safe Drinking Commission Regulation 10 CSR 60-9.010 which establishes requirements for maintaining public water system records.

   The records of microbiological analyses and operational analysis must be retained for a minimum of five (5) years. The records of chemical analyses and any inspection reports must be retained for a minimum of ten (10) years. The records of action taken by the public water system to correct violations of regulation/law must be retained for a minimum of three (3) years. These records or reports pertaining to the public water system must be provided to its customers and to the department upon request.

   The department recommends supply file all administrative documents (Permit to Dispense, emergency operations plan, distribution map, etc.) in a separate file from sample results. This recommendation will allow easier access to documents that must be accessible to key personnel and kept on file at all times. This can also help facilitate proper disposal of outdated sample results.

   The department requires that Indian Hills Utilities retain public water system records or reports for the minimum time frame outlined above.

Source

1. Well #2 is currently off-line due to well pump malfunction.

   The public water system serves approximately 2,500 individuals with only one (1) active well and no emergency back-up supply. Public water systems serving a population greater than 500 individuals should have two (2) or more active sources of water. With Well #2 being off-line, your only option is to haul in water using tanker trucks.

This can be eliminated by repairing Well #2 and bringing it back on line. In addition to an emergency supply, Well #2 could also relieve Well #1 by alternating run times, giving the ground water recharge area around Well #1 additional time to replenish.

When Well #2 is repaired, the following upgrades need to be installed:

a. Check valve – located close to the well and before the master meter;
b. Shut off valve – located between the well head and water system to isolate the well from the distribution system;
c. Drawdown gauge – after installation readings should be taken at minimum in the summer months, but preferably reading should be conducted monthly; and
d. Casing vent's diameter needs to be increased to 1.5 inches. The vent will have to be installed on the side of the well casing, not through the well head seal.

The department recommends that the public water system repair all components for Well #2, to have an additional source of water for the water system.

2. The master meter for Well #1 is not being read.

Master meter readings contribute to the effective operation of a public water system. It can be used to identify some of the problems that result in water outages. Also, when compared to the water sold a public water system can identify the amount of water lost through leaks or flushing of lines. Water production is one of the items that should be included in operational records and routinely reported to the Public Drinking Water Program on operating report forms.

The department recommends at minimum that the public water system record the master meter readings at least weekly and maintain a copy of these records in an accessible area for accurate accounting of water pumped by the well.

3. A sample tap was not provided for collecting samples at the well prior to any chemical treatment for Well #1.

The Ground Water Rule requires each public water system to have a sample tap on/near the well discharge piping so that a microbiological sample can be collected prior to any chemical treatment or any storage. Sampling the source water (well) is required whenever there is a total coliform positive sample in the distribution system. Accurate sampling from the well can help rule out the source water as a possible contamination point within the potable water system. The sample tap should be all metal and smooth nosed (no hose bib threads). Installation of the sample tap is preferred to be on the well discharge pipe before the check valve. This location also provides a means to verify that the check valve is holding and not leaking.

The department recommends that the public water system must install a sample tap at the well discharge pipe before the check valve.

4. The well's drawdown gauge is not being utilized to measure for static water level(s) and pumping water level(s) throughout the calendar year for Well #1.

Drawdown measurements/readings are used to detect the water level within the well. If the water is drawn down to the pump intake point, pump damage may occur. Drawdown measurement/readings are intended to make it possible for the operator to detect and prevent such problems.

The department recommends, at minimum, that drawdown readings be taken during the summer months when water usage is at the highest, however, monthly readings are recommended for verification of well water level(s) throughout the calendar year.

5. Corrosion was observed on the surface of the well casing, wellhead and piping.

   Failure to control corrosion on the metallic surfaces of the public water system's components may result in premature failure and unnecessary water outages. It is important to clean off the rust and scale then apply rust preventive paint before the well components deteriorate further. Additional damage to the casing may require the casing to be cut and a new casing section welded on. This is a significant expense the public water system can avoid with proper maintenance and repairs.

   The department recommends that the public water system clean (remove) rust and scale from all metallic surfaces and apply a surface protective coating.

6. Poor housekeeping was observed in the well houses at both wells.

   The well house is in a state of clutter and disarray. Dust, debris, parts and equipment are scattered around the floor making access to equipment difficult and hazardous. This situation makes proper maintenance and operation difficult.

   The department recommends that the public water system reorganize or remove miscellaneous equipment stored inside the well house then thoroughly clean the well house walls, floors, etc.

Distribution

1. The public water system does not have a cross-connection control plan in accordance with Missouri Public Drinking Water Commission regulation 10 CSR 60-11.010.

   A cross-connection between the system and anything other than approved portable water may cause a serious health hazard to the customers should a backflow event occur. All community public water systems should have a local ordinance or policy prohibiting any cross-connection. The ordinance or policy should also require the installation of the appropriate backflow prevention device on the customer's service line and annual testing of the customer's device. A sample ordinance was given to you at the time of this inspection.

   The public water system must enact an appropriate cross-connection control ordinance or policy and begin enforcement of the ordinance or policy. Within **60 calendar days**, from the receipt of this inspection report the public water system must submit a copy of the cross-connection control ordinance or policy to the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, P.O. Box 250 (111 Fairgrounds Rd.), Rolla, MO 65402-0250.

The department requires that Indian Hills Utilities submit an ordinance or policy for a cross-connection control plan for their public water system within 60 calendar days.

2. The department has experienced a high volume of customer concerns in regards to low water pressure within the public water system, during a main break or leak.

   Failure to maintain minimum pressures of at least 20 pounds per square inch (psi) are considered a health hazard and a violation of the Missouri Public Drinking Water Commission regulation 10 CSR 60-4.080(9). This pressure level is required to keep contamination from entering the system and back flow from household appliances entering the distribution system. During a main break or leak event the customers affected must be notified by phone, email, door to door, etc. if pressure drops below 20 psi, to boil their water until safe samples are obtained from that area of the distribution system. The public water system must also report any low water pressure events or boil advisories to the department. A copy of the "Report of Low Water Pressure" form was given to you at the time of this inspection for reporting any pressure drops below 20 psi events within the distribution system.

   The department requires the public water system to notify customers and the department of any low water pressure events below 20 psi or boil advisories issued by the public water system.

3. The public water system does not have an up-to-date distribution map.

   Copies of an updated distribution map(s) should be made available to water system operators and others involved in operation, maintenance and management of the public water system. Water lines need to be indicated on distribution map(s) in relation to buildings, roads or permanent landmarks. Known water lines should have size indicated and be shown as a solid line on the map(s). With unknown water lines, estimated locations should be indicated as dashes on distribution map(s). Accurate locations of public water system facilities can be critical in times of an emergency and may aid to eliminate and/or reduce the duration of water outages during repairs.

   The department recommends that the public water system establish an updated distribution map(s) depicting the entire water system to include accurate locations of water lines, hydrants, valves, sample points, etc.

4. The public water system does not have a program for or does not practice routine unidirectional water main flushing. Water main flushing currently is only conducted on an as needed basis.

   A properly designed and implemented unidirectional flushing program is crucial for maintaining good water quality and for properly maintaining a water distribution system. Proper flushing moves water through the lines in an organized fashion at velocities high enough to create a scouring action inside the pipe. Water velocities during flushing should reach at least two-and-one-half (2-½) feet per second (fps) and preferably five (5) fps. Flushing velocities should not exceed eight (8) fps. The entire system should be flushed at least semi-annually unless water quality requires more frequent flushing of the total distribution system. When flushing isolated parts of the system, it is important to not cause pressure or turbidity problems in other parts of the distribution system.

Hydrants and valves should always be opened and closed slowly to minimize water hammer. Water tower levels and system pressures must be managed to prevent low pressures. All details of the flushing event (pressures, flows, velocities, minutes each hydrant is flushed and the open or closed configuration of each valve) must be recorded. Special bacteria samples should be taken throughout the system after flushing to make sure the high water velocities did not cause bacteriological problems.

The department recommends that the public water system develop and institute a proper water main flushing program that will begin at or near the water source and move outward through the distribution system.

Storage

1. The public water system does not have sufficient water storage for the current population.

   A water storage tank(s) of adequate volume is necessary for efficient operation of a public water system. In operation, pressure tanks act as well control devices rather than true storage. The greatest wear on a well pump occurs when it is turned on, not while the pump is running. With an insufficient sized pressure tank or water storage tank, the well pump is turned on frequently for very short durations. By sizing the gross volume of a pressure tank or water storage tank at 35 gallons per person served, the well pump is activated less and allowed to run for a longer period of time before it shuts off, resulting in less wear on the well pump motor. An adequately sized pressure tank or water storage tank also provides a more even and constant pressure to your customers. The public water system should plan on a gross volume of 35 gallons for each person served and an average of three (3) persons per household.

   The department recommends that the public water system begin planning now for adding additional storage tanks to adequately serve the water system.

2. The public water system does not have the most recent water storage facility's inspection and/or repairs reports.

   The public water system had the 20,000 gallon ground storage tank inspected in 2011. A copy of all work conducted by the engineering firm and/or contractor is recommended for the public water system to obtain and have available as a reference document for the department during an inspection. This report(s) is also important for any company warranty on parts, coatings, etc. that were used on the storage facilities. Without this report(s) the public water system will be unable uphold the warranties and if structural or component failures occur this could cost the public water system additional monies for repair(s) and/or replacement(s).

   The department recommends that the public water system set a policy requiring detailed inspection reports on any inspections and/or repairs conducted on the water storage facilities and maintain this report in an easily accessible area where it can be used by the public water system and the department as a reference document.

3. The pubic water system does not have any records of the 5,000 gallon pressure tank ever being inspected by a professional tank inspector.

   Contamination of water storage facilities is a leading cause of unsafe potable water in public water systems. Water storage facilities should be inspected by a professional tank inspector for physical deterioration and sanitary features, every three (3) to five (5) calendar years. Inspection should include any observed corrosion on the interior or exterior of the water storage facility. Pealing, flaking paint or blisters are all avenues for bacteria and other contaminants to "lodge" into the walls of the water storage tank. The inspection should clearly document the condition of the water storage facility including both structural and sanitary features. It is important that the report cite individually each of the sanitary features of the tank and their conditions.

   The department recommends that the public water system procure services from a contractor of their choosing to inspect, clean, repair/replace components and paint any exterior or interior portions of the water storage facility.

4. The water storage facilities are partially housed. The back 90% of the water storage facilities are buried and not protected by a building.

   Water storage facilities should be above the normal ground surface and housed to protect from weather conditions. Any housing should allow enough room for visual inspections of the water storage facilities' outer surfaces. Without proper housing around the water storage facilities, rust and corrosion may go unnoticed causing leaks or ruptures to the tank walls, which may result in unnecessary water outages and premature replacement of the water storage facilities.

   The department recommends that the public water system begin plans to uncover the water storage facilities and construct housing for proper weather protection.

5. Corrosion was observed on the surface of the water storage facilities exterior surfaces and related components housed within the well house.

   Failure to control corrosion on the metallic surfaces of the public water system's components may result in premature failure and unnecessary water outages. It is important to clean off the rust and scale then apply rust preventive paint before the pressure tank and related components deteriorate further. Additional damage to the pressure tank and related components may require the tank walls or piping is cut and new sections welded on. This is a significant expense the public water system can avoid with proper maintenance and repairs.

   The department recommends that the public water system clean (remove) rust and scale from all metallic surfaces and apply a surface protective coating.

Treatment

1. The public water system has only one (1) chemical feeder and a repair kit for this feeder. Standby or redundant disinfection facilities are not provided.

A backup chlorination pump was not provided to continue disinfection if the current pump should fail. Because the public water system is required to disinfect, equipment failure would require the public water system to shut down or issue a boil water notice.

The department recommends that the public water system acquire essential backup parts and equipment to ensure that chlorination equipment can be replaced in a timely manner.

2. The ventilation piping for the chlorine solution tank is not screened.

   Current configuration of the ventilation piping of the chlorine solution tank could allow the entrance of birds and large insects into the chemical tank. This situation can be eliminated by installing an 18 gauge mesh corrosion resistant screen over the outside piping.

   The department recommends that the public water system install a screen over the outside ventilation piping for the chlorine solution tank.

Pumping Facilities

1. There is no emergency notification system for the failure of a critical presssure booster pump(s).

   The public water system should have a functioning telephone dialer or similar automatic system to notify the operator in the event a critical pump or other critical process fails to operate. Without proper notification the operator will not be alerted to a malfunction or failure until customers call reporting a service outage. If pressure drops below 20 psi as a result, a boil water notice will be required.

   The department recommends that the public water system consult with an engineer and begin the process to install a failure alarm system for the pressure booster pumps.

2. The public water system has only one (1) booster pump available at each well/storage facility for pressure regulation.

   The public water system should have at least two (2) equal and functioning units, so if one unit fails the facility can still provide service. Currently if a booster pump should fail and the pressure drops below 20 psi a result a boil water notice will be required.

   The department recommends that the public water system obtain a secondary unit for each booster pump in case of emergency or failure so service can still be provided.

3. There is no lighting within the pump house for safety or for routine inspection and maintenance at the Highway DD Booster Pump Station.

   For safety and basic routine operations, lighting must be provided so that every part of the facility is well lit and all instrument readings, maintenance and operations can be performed without additional lighting.

   The department recommends that the public water system add or improve the lighting within the pump house.

4. There is no heating or adequate ventilation for the Highway DD Booster Pump Station.

   This pump station does not heat to prevent freezing in the winter or adequate ventilation or humidity control for the summer. Excessive heat or freezing could result in equipment malfunction and possibly damage to the water system components, resulting in low water pressure events or water outages.

   The department recommends that heating and adequate ventilation be installed to insure that public water system equipment does not malfunction during extreme temperatures.

5. The building walls for the pump house at Highway DD Booster Pump Station are rotting and falling down.

   Excessive moisture within the pump house has started to rot out the walls. Pieces of wall board, insulation, and other debris are all over the floor of the pump house. Unless repairs are made the water facility components may be in jeopardy of damage from the weather or from unauthorized access (animal).

   The department recommends that the public water system clean out the pump house and make the necessary repairs to the wall to eliminate debris from falling onto the floor.

COMMENTS:

A bacteriological sample was taken at the time of inspection at 2484 Sanchez sample site location and the results were absent total coliform. Chlorine residuals were taken during this inspection and the results were 0.78 mg/L Free and 0.83 mg/L Total.

Since the last inspection conducted by the department on September 20, 2011, the public water system has obtained an agreement for a generator during emergency situations, vented the active chlorine tank to the outside, repaired the electrical line to the ground storage tank, paid outstanding primacy fees for 2004-2007 and 2009-2010, and Mr. Matthew Eaton obtained his DS II level of certification. I would like to commend you for your efforts and attention to the water system in providing safe potable water for the public to drink. I would also like to thank you and Mr. Eaton for your time and assistance during the inspection. If there are any questions concerning this report please feel free to contact me at 573-368-7344.

SUBMITTED BY:

Michelle Oglesby
Environmental Specialist III
Southeast Regional Office
Rolla Satellite Office

APPROVED BY:

Bradley K. Ledbetter
Chief, Public Drinking Water Unit
Southeast Regional Office

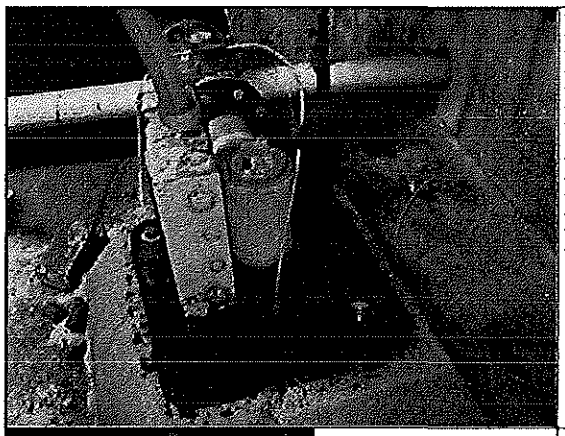


Photo #:1
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Well head and casing for Well #1.

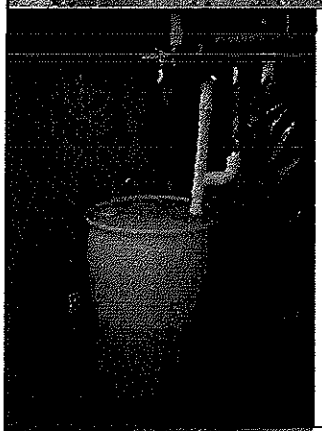


Photo #:2
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Chlorine pump and solution tank.

Photo #:3
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Chlorine injection point, just after the well and before the 20,000 gallon ground storage tank.

Photo #:4
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: East end of 20,000 gallon ground storage, upper terminal.

Photo #:5
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: East end of 20,000 gallon ground storage, lower terminal with piping.

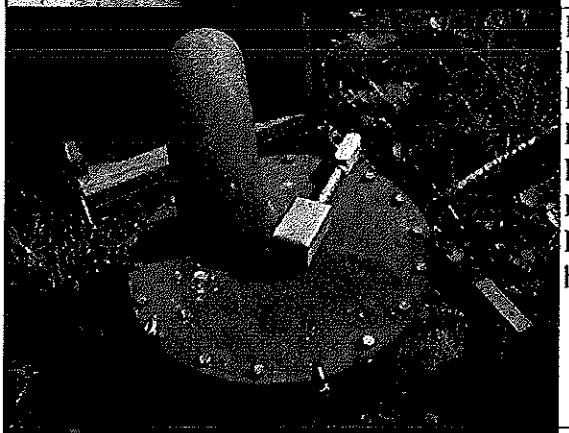


Photo #:6
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: 20,000 gallon ground storage access hatch and vent/over flow piping.

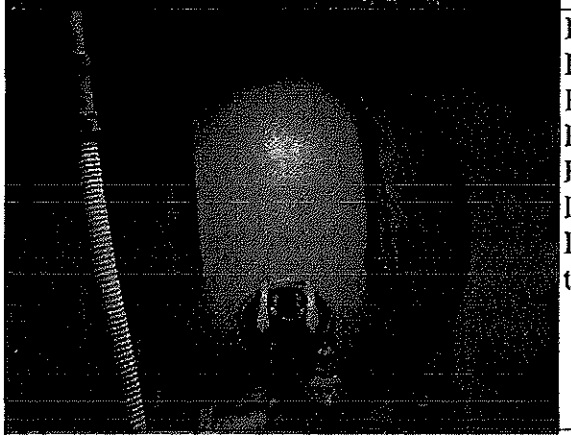


Photo #:7
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: North end of 5,000 gallon pressure tank.

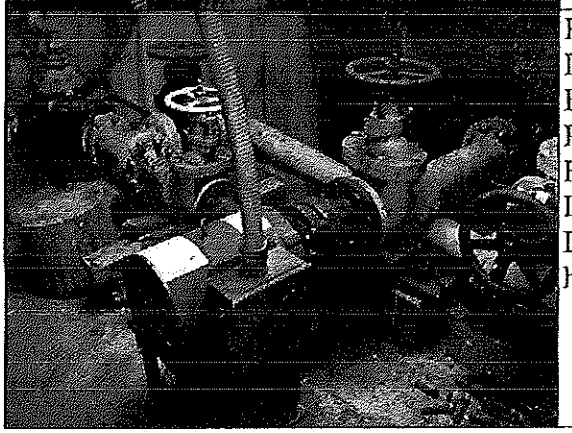


Photo #:8
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Pump and piping within the well house for Well #1.

Photo #:9
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Well head and casing for Well #2.

Photo #:10
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Piping for Well #2.

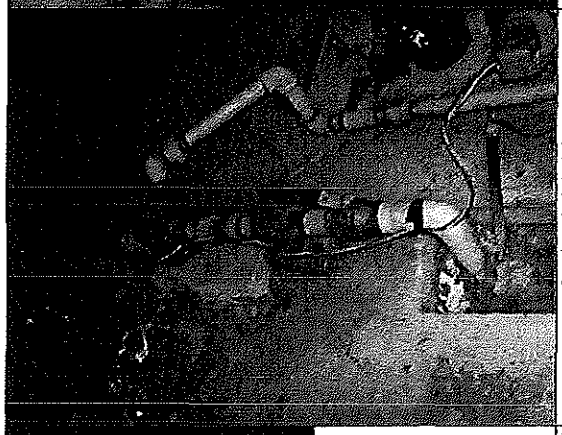


Photo #:11
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Pressure booster pump for homes along Highway DD.

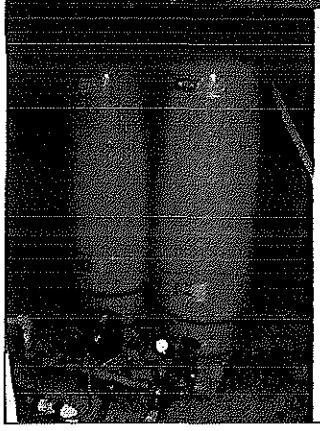


Photo #:12
Date Taken: 08/20/2014
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities
Description: Pressure tanks that work in conjunction with booster pump for additional pressure within the system. They are not used as storage.

Crawford County - PDWB
Indian Hills Utilities Operating Co. Inc.
General File
PWS ID # MO6036052

SCHEDULE JC-02

Jeremiah W. (Jay) Nixon, Governor • Harry D. Bozoian, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

November 4, 2016

Mr. Josiah Cox, Owner
Indian Hills Utilities Operating Co. Inc.
c/o Central States Water Resources
500 Northwest Plaza Drive, Suite 500
St. Louis, MO 63074

Finding of Compliance

Dear Mr. Cox:

An Inspection was conducted by the Missouri Department of Natural Resources staff pursuant to Section 640.100.4 of the Missouri Safe Drinking Water statutes on October 26, 2016. The Indian Hills Utilities Operating Co. Inc.'s Public Water System was found to be in compliance based upon the observations made at the time of this inspection.

The Report of Inspection describes the findings and may list important recommendations that should be considered to ensure continued compliance. Your cooperation implementing those recommendations will be appreciated.

If you have questions regarding the enclosed inspection report or would like to schedule a time to meet in person, please contact Ms. Michelle Oglesby at (573) 368-7344 or in writing at the Missouri Department of Natural Resources, Southeast Regional Office, Rolla Satellite Office, 111 Fairgrounds Road (P.O. Box 250), Rolla, MO 65401.

Sincerely,

SOUTHEAST REGIONAL OFFICE

Bradley K. Ledbetter
Chief, Public Drinking Water Unit

BKL/mol

Enclosures: Report of Inspection

c: Mr. Ben Kuenzel, Midwest Water Operations LLC, 1351 Jefferson, Suite 301, Washington, MO 63090
Mr. Matt Eaton, 201 East Spencer, Cuba, MO 65453
Public Service Commission, P.O. Box 360, Jefferson City, MO 65101-0360
Public Drinking Water Branch (electronically)

Missouri Department of Natural Resources
Southeast Regional Office/Public Drinking Water Program
Report of Inspection
Indian Hills Utilities Operating Co. Inc.
500 Northwest Plaza Drive, Suite 500, St. Louis, MO 63074
Crawford County Missouri
MO6036052
November 4, 2016

Introduction

Pursuant to Section 640.100.4 of the Missouri Safe Drinking Water Statutes, a routine Compliance and Operation Inspection of Indian Hills Utilities Operating Co. Inc.'s public drinking water system was conducted by the Southeast Regional Office on October 26, 2016. This inspection was conducted to determine the facility's compliance with the Missouri Safe Drinking Water Statutes and the Missouri Safe Drinking Water Regulations. This report presents the findings and observations made during the inspection and covers all (8) critical components of a public water system; System Management and Operation, Operator Certification, Monitoring and Reporting, System Source, System Treatment, Pumping Facilities, Finished Water Storage, and Distribution System.

The following people were present at the time of the inspection:

Indian Hills Utilities Operating Co. Inc.
Mr. Josiah Cox, Owner (314) 736-4672
Mr. Ben Kuenzel, Engineer (636) 432-5029
Mr. Matt Eaton, Chief Operator (573) 205-3241
Mr. Joe Cason, Operator (573) 259-43473

Missouri Department of Natural Resources (department)
Ms. Michelle Oglesby, Environmental Specialist III (573) 368-7344

Facility Description and History

The Indian Hills Utilities Operating Co. Inc.'s water system is classified as a community public water system that is in operation throughout the year. This is a primary system which is 100% groundwater. The system is comprised of two (2) wells, two (2) booster pump stations, a 263,000 gallon standpipe and a 53,000 gallon standpipe. The water system is a chlorinated system utilizing 12% sodium hypochlorite or liquid chlorine. The system serves a population of approximately 2,200 individuals with 712 service connections. The water system is unable to calculate average water usage or water loss since Mr. Cox has taken ownership of this public water system, because historical records where not turned over by the previous owner. Since Mr. Cox has taken possession of public water system, his company has been diligently replacing leaking lines and upgrading the entire system. The current upgraded water system is keeping track of water loss (only a couple of months of data at this time). However, there is no historical data to report water loss or usage.

Indian Hills Utilities Operating Co. Inc.'s water system is classified at a DS II level of certification for treatment and distribution. The operator in charge of treatment and distribution is listed as Mr. Matt Eaton, Certification #11846. Mr. Eaton has a DS II certification. Mr. Joe Cason, Certification #2316 is listed as the stand-by or backup operator. Mr. Cason has a DS III and Level C certifications.

The last inspection was conducted on August 20, 2014, with several items noted for correction for the previous owners. Since that time, Mr. Cox has upgraded the major components of this public water system. Well #1 was refurbished with a new drop pipe and pump, booster pump station, chemical injection room and equipment. There are backup pumps for treatment and a continuous chlorine reader for verification of amount of chlorine being injected into the water system. Installation of a generator for Well #1, that automatically turns on if loss of power occurs at this well and a 263,000 gallon standpipe. Previous storage at this well was inadequate for the number individuals on this water system. Well #3 was drilled for usage/back-up and set up like Well #1, along with an additional 53,000 gallon standpipe.

Since Well #2 could not be salvaged, it has been removed from the water system and plugged appropriately. Documentation of all water system ordinances, site plans, maps, sampling, etc. is being kept in one central location and operator is able to access if asked for.

Previous owner was under a Bilateral Compliance Agreement (BCA) for not obtaining a properly certified stand-by operator that was signed on July 17, 2015. This BCA was closed on April 22, 2016, after Mr. Cox provided proof of a certified operator and back-up operator for the water system.

Prior to the inspection, the files and other facility information for Indian Hills Utilities Operating Co. Inc. Public Water System (MO6036052) were reviewed. The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site.

Discussion of Inspection and Observations

Upon arrival at the facility, I met with Mr. Josiah Cox, Mr. Ben Kuenzel, Mr. Matt Eaton, Mr. Joe Cason and multiple members of the Public Service Commission. During this time, I introduced myself and conducted a review of all relevant paperwork associated with the water system. Current paperwork and records appeared to be well kept and in order. It was noted that no historical records where given to Mr. Cox from the previous owner. The facility appeared to have a copy of their lead ban and cross connection agreements, emergency operations plan, coliform site plan, distribution map, and had records of all coliform and chemical sample results.

After the records review, I inspected the wells and storage tanks beginning at Well #1 and 263,000 gallon standpipe. Well #1 was drilled in 1963 and is approximately 990 feet deep with 275 feet of 8" casing. The well pumps approximately 220 gpm. The well house, treatment facilities, booster pumps and all controls appeared to be in good working condition. The 263,000 gallon standpipe has a ¼ inch screen with flap valve. The flap valve does not have a gasket and does not fit tight to overflow pipe, creating a gap that insects could get into and potentially contaminate the water storage tank. Well #3 was drilled in 2016 and is approximately 1,050 feet deep with 400 feet of 10" casing. The well pumps approximately 320 gpm. The 53,000 gallon standpipe has a ¼ inch screen with flap valve. The flap valve does not have a gasket and does not fit tight to the overflow pipe, creating a gap that insects could get into and potentially contaminating the water storage tank. Well #2 has been removed from the water system and properly plugged by Flynn Well Drilling. Also, the booster pump station at Well #2 has been removed along with the pressure tanks at Well #1.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection. The manufacturer's standard methods and sampling procedures for each instrument were followed. The instruments for field monitoring that were utilized on the inspection are the Hach chlorine colormeter, Missouri State Health Department approved bacteriological sample bottles, and the necessary reagents. All instruments were properly calibrated according to manufacturer's recommendations and all reagents were used prior to the stated expiration date. QA/QC data for all field equipment is maintained at the regional office. The sample was analyzed as coliform absent (**safe**). **The following analytical field data was collected at the time of inspection:**

Analytical Field Data			
Parameter	**Sample Location**	**Results**	**Units**
Bacteria (Total Coliform)	Community Hall #R2	Absent	CFU/100 ml
Chlorine (Free)	Community Hall #R2	0.93	mg/L
Chlorine (Total)	Community Hall #R2	1.15	mg/L
Bacteria (Total Coliform)	Maintenance Shed #15	Absent	CFU/100 ml
Chlorine (Free)	Maintenance Shed #15	1.11	mg/L
Chlorine (Total)	Maintenance Shed #15	1.15	mg/L

Compliance Determination and Required Actions

This facility was found to be in **compliance** with the Missouri Safe Drinking Water Regulations based on observations made at the time of the inspection.

Recommendations

1. An improperly constructed flap valve on the overflow piping allows the entrance of insects into the water storage facilities.

   Overflow piping should be protected from the entrance of birds, animals or insects by a tight fitting counterweighted flap valve and/or screen. The current ¼ inch screen eliminates the entrance of birds or animals, but can allow the entrance of insects, because the flap valve is not tight fitting to the overflow piping.

   It is strongly recommended that the utility contact a water storage tank maintenance company of your choosing to replace the existing flap valve or provide a gasket so the current flap valve is tight fitting to the overflow piping, to eliminate possible contamination of the water storage facilities.

Additional Comments

I would like to commend you for your efforts and attention to the water system in providing safe potable water for the public to drink. I would also like to thank you, Mr. Ben Kuenzel, Mr. Matt Eaton, and Mr. Joe Cason for their time and assistance during the inspection. If there are any questions concerning this report please feel free to contact me at 573-368-7344.

Signatures

SUBMITTED BY:

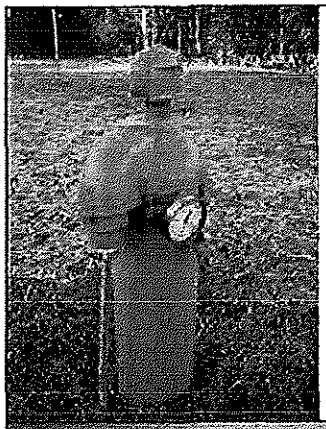
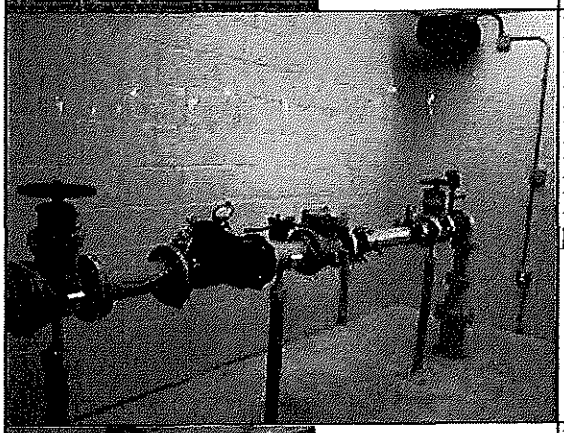
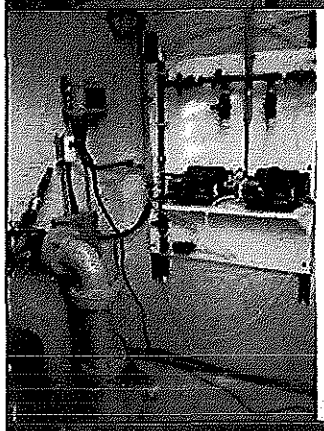
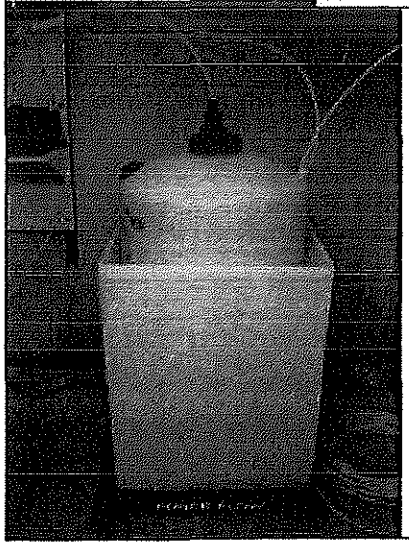
Michelle Oglesby
Environmental Specialist III
Southeast Regional Office

REVIEWED BY:

Bradley K. Ledbetter
Chief, Public Drinking Water Unit
Southeast Regional Office

Attachments

Attachment #1 – Photos 1-17
Attachment #2 – Map – Page 5

	**Photo #:001** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1
	**Photo #:002** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 - Piping
	**Photo #:003** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – Chlorine Room with chlorine pumps.
	**Photo #:004** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – Chlorine Room with chemical storage.

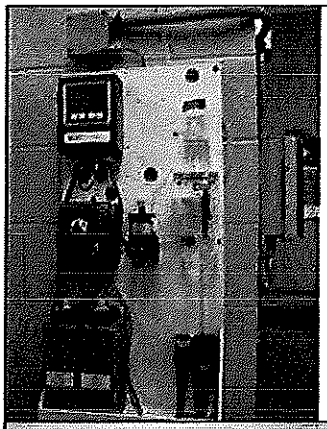
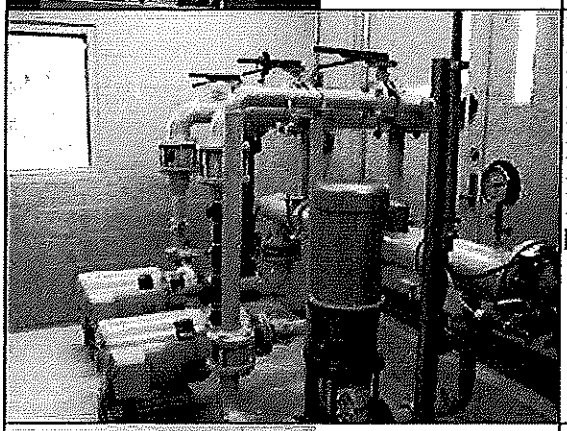
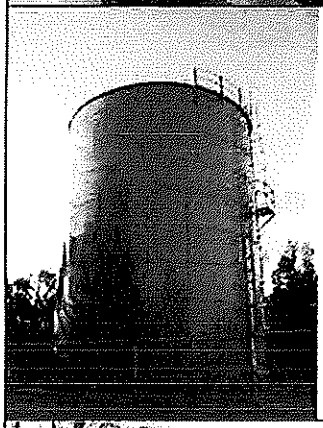
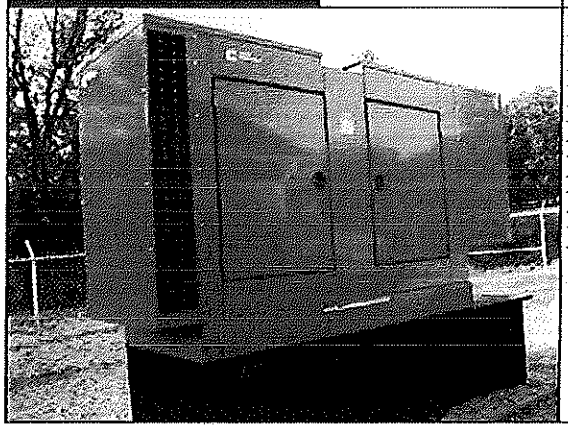
	**Photo #:005** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – Continuous chlorine reader.
	**Photo #:006** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – Booster Pump Station
	**Photo #:007** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – 263,000 gallon standpipe.
	**Photo #:008** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #1 – Generator

Photo #:009
Date Taken: 10/26/2016
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities Operating Co. Inc.
Description: Location where Well #2 used to be.

Photo #:010
Date Taken: 10/26/2016
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities Operating Co. Inc.
Description: Location where Well #2 booster pumps station was located.

Photo #:011
Date Taken: 10/26/2016
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities Operating Co. Inc.
Description: Well #3

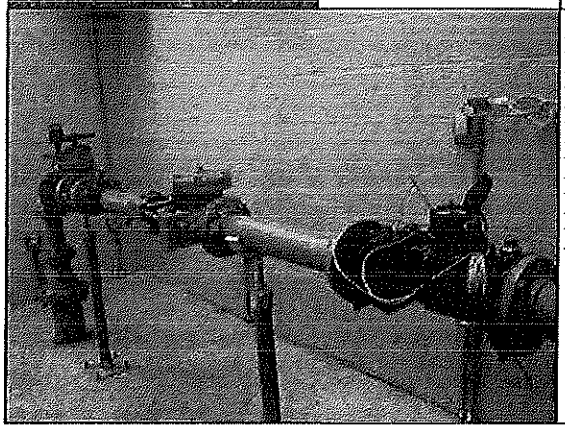
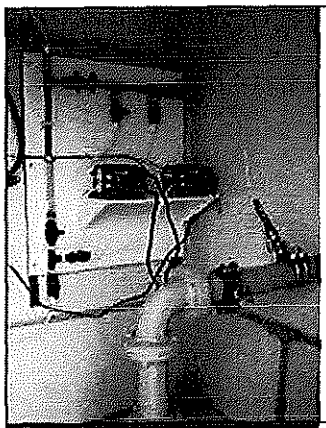
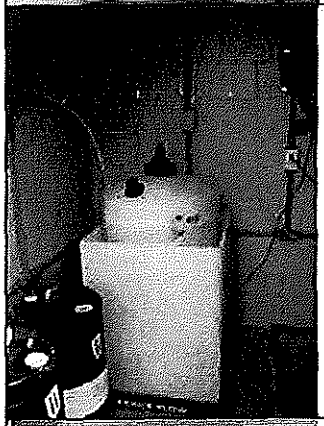
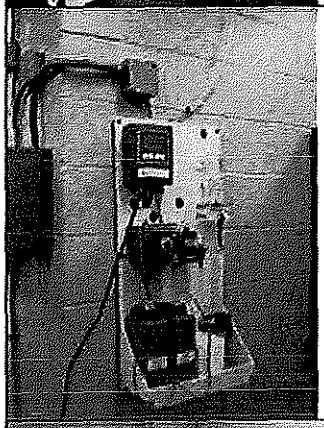
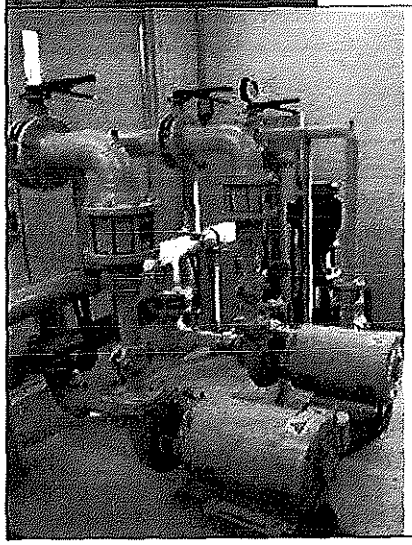
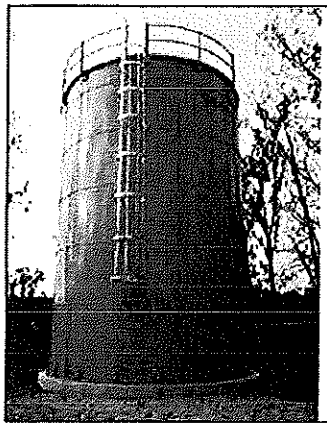
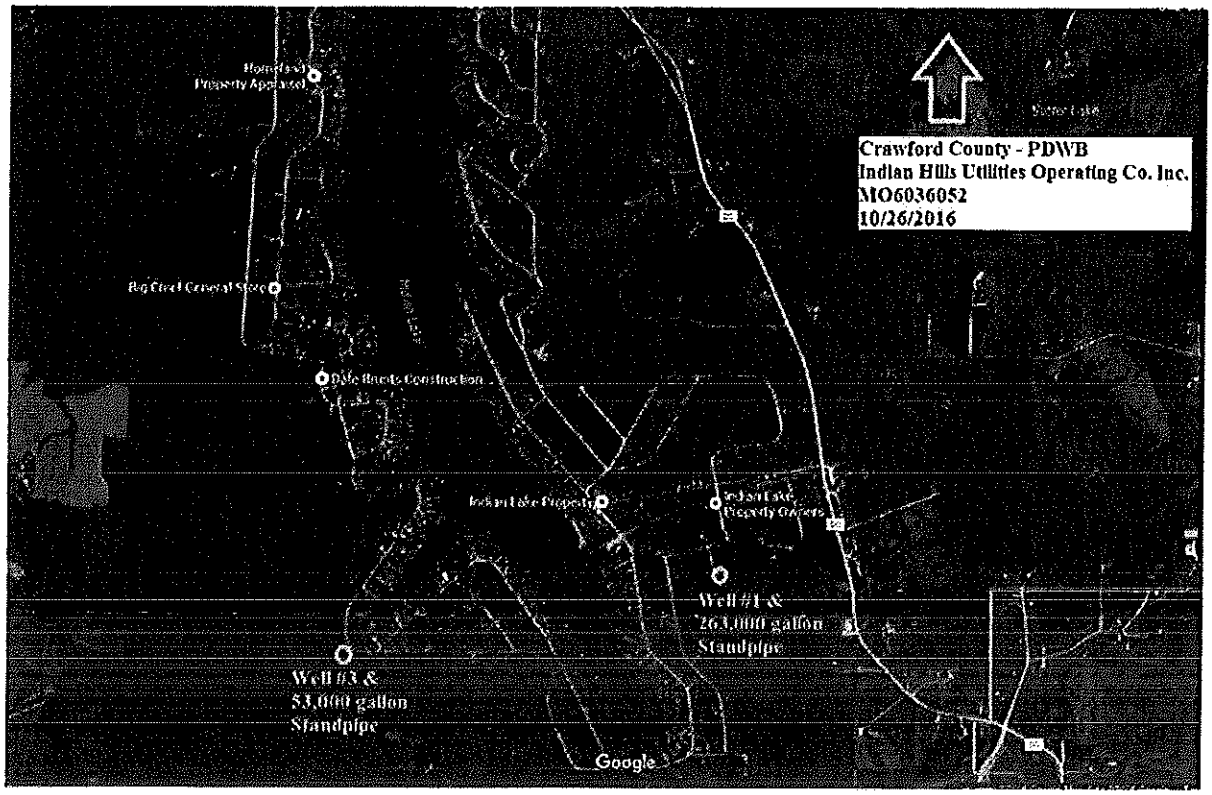


Photo #:012
Date Taken: 10/26/2016
By: Michelle Oglesby
Program: PDWB
File: Crawford County
Location: Indian Hills Utilities Operating Co. Inc.
Description: Well #3 - Piping

	**Photo #:013** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #3 – Chlorine Room with chlorine pumps.
	**Photo #:014** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #3 – Chlorine Room with chemical storage.
	**Photo #:015** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #3 – Continuous chlorine reader.
	**Photo #:016** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #3 – Booster Pump Station.

	**Photo #:017** **Date Taken:** 10/26/2016 **By:** Michelle Oglesby **Program:** PDWB **File:** Crawford County **Location:** Indian Hills Utilities Operating Co. Inc. **Description:** Well #3 – 53,000 gallon standpipe.

ATTACHMENT #2 – Map
November 4, 2016
Indian Hills Utilities Operating Co. Inc.



SCHEDULE JC-03

HAS BEEN IDENTIFIED AS

CONFIDENTIAL