

No Need to Panic – Preparing for a KDHE Wastewater Inspection



Raw sewage bypasses such as this must be reported to KDHE within 24 hours, and a written Incident Report Form submitted within five days of the incident. Such records should be available to KDHE staff during inspections.



If the wastewater plant uses UV disinfection, KDHE inspectors will likely want to review records on cleaning and maintenance. The system should have records of how many hours each bulb has been in service since installation. Most systems clean individual bulbs every one to two weeks.

Over the past couple of years, I have received several calls from new operators who were more than a little bit anxious about an upcoming KDHE inspection of their wastewater treatment facilities. That's understandable as all of the calls were from new operators who had never been involved in such an inspection. With many baby boomers retiring and new operators taking their place, I anticipate receiving more such calls. Regardless, preparing for a KDHE inspection shouldn't raise that much anxiety, especially if day-to-day tasks are carried out and the required paperwork is kept up-to-date. This article aims to help new operators understand what's involved in a KDHE inspection and how to best prepare for one.

Monitoring and compliance

Compliance is probably the most important aspect of any KDHE inspection and involves ensuring the facility complies with all requirements in their NPDES (discharging) permit. Obviously, for operators of a non-discharging lagoon, meeting effluent limits is not a concern. But operators of a discharging lagoon or any mechanical plant need to be intimately familiar with the system's permit and especially those limits placed on the effluent. The first step is ensuring the operator(s) have a copy of the system's current permit. The KDHE inspector may ask for a copy of it. If the system does not have a current copy, please get in touch with the area KDHE district office or me. And don't assume that an older permit will be sufficient or accurate. Additional monitoring requirements have been added to many permits over the past few years, such as nutrient monitoring and ammonia limits in the case of discharging lagoons. So make sure the system's permit is current.

The next step is to gather all influent and effluent data from at least the past three years and organize it in a manner the KDHE inspector can review. Options include providing copies of the laboratory's actual test results or the electronically submitted monitoring reports. I would take it a step further and create a spreadsheet including all influent and effluent data. Once the data is in a summary form, it's much easier to see any trends occurring and determine compliance. Including influent data can also help determine if the system may have any high-

strength wastewater discharges from commercial or industrial customers on the system. In short, operators need to provide paperwork to show the facility is either meeting effluent limits or having problems. After all, that is the purpose of the inspection.

Additional permit requirements

It would help if operators also determined whether or not the facility has a Schedule of Compliance. A Schedule of Compliance is typically included in a permit if the facility is not meeting effluent limits. The schedule usually includes compliance dates for hiring an engineer, submitting a Preliminary Engineering Report and actual plans and specifications, and starting and completing construction of any upgrades to return the facility to compliance.

Additional data I would have available for mechanical plants is flow data. The inspector may want to see if the facility frequently exceeds design flow and whether or not excessive infiltration and inflow could be a problem. I also recommend having copies of any “Wastewater Incident Report Forms” submitted for the past three years. This form is used to report any raw sewage bypasses in the collection system or situations that may require bypassing any components in the treatment process. Again, KDHE wants to see if any conditions may require more attention such as unreliable lift stations or sections of the collection system that need to be cleaned.

I also recommend having copies of any “Wastewater Incident Report Forms” submitted for the past three years.



This photo shows an example of a well-maintained lagoon cell. If possible, grass should be mowed before any inspection or kept at a respectable height at all times. Trees, cattails, and other aquatic plants are well-controlled and not a problem.

Maintenance records

The system should have records showing all maintenance that has been provided on all mechanical equipment over the past three years. So, suppose the system has aerators, blowers, pumps, mechanical bar screens, a grit removal system, chemical feeders, etc., requiring maintenance. In that case, records showing that the required maintenance was done should be available. This also includes maintenance records for lift stations in

the collection system and emergency generators if provided. It might also be a good idea to show the inspector any spare parts the system may have on hand or be able to acquire quickly should problems arise. Mechanical plants should also have records on how UV disinfection units are maintained. These should include dates showing when bulbs have been cleaned and last replaced. Operators should also be able to show replacement bulbs that are available when needed.

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Many plants and lift stations have stationary emergency power. During KDHE inspections, the system may be asked to provide records showing that generators are routinely maintained and tested weekly.



This photo shows an example of a warning sign. Warning signs must be legible. Signs should be posted on all sides of the facility to help limit the system's liability.

General ground maintenance

Lagoon dikes and grassy areas around mechanical plants should be recently mowed. Operators of lagoons should also make sure trees and other brush are well-controlled and not growing on the lagoon dikes. Are there problems with aquatic plants such as duckweed? If so, how has the system tried to control it? Dike erosion should also be kept to a minimum and indicate plans to repair any areas with severe erosion that could result in dike failure or present a safety hazard when mowing. Finally, KDHE likes to see staff gauges in each cell. This is especially important in non-discharging lagoons cells as their permits require notifying KDHE if there is less than two feet of freeboard.

The lagoon or plants must also be secured to prevent the entrance of trespassers. While we all recognize that trespassing can't be prevented all the time, it is to the system's benefit to do everything possible should an accident occur. The system's liability should be covered satisfactorily if the fence around the facility is in good



KDHE inspectors will likely request maintenance records for equipment such as this small belt press in a wastewater utility. The utility should also have an operations manual for equipment.

shape, warning signs are posted and the gates are padlocked. If warning signs are old, rusted and not readable, they should be replaced.

Violations that can result from an inspection

While enforcement action rarely results after inspections, it can depending on the issue. Not meeting permit limits can result in KDHE taking action, but more than likely, that will be in the form of a Schedule of Compliance in the next permit renewal. Other issues that can result in

an enforcement action are ignoring any Schedule of Compliance the system already has, falsifying data and/or other records and not taking corrective action on violations cited in the past. The system also needs to ensure they have an operator certified to the level required of the system. If the system's operator is making a good-faith effort to get certified by attending training sessions and taking exams, KDHE is usually pretty easy to work with.

Hopefully, these suggested ideas give both new and seasoned operators ways to better prepare for future KDHE inspections. Look at such inspections as a way to improve operations and the performance of the wastewater treatment facilities.

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Health and Environment. He is a graduate of the University of Kansas with a degree in Environmental Studies with an emphasis in aquatic biology.

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