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February 4, 2010

Travis Adams  
City of Ozawkie  
PO Box 120  
Ozawkie KS 66070

Dear Travis,

We discussed confined spaces and lagoons on February 1, 2010. I understand the lift station becomes plugged with debris and entry is required to remove the pumps for maintenance. My suggestion is that a basket could be added into the structure to catch the debris, resulting in less need to enter the space. Entry into any lift station is in most cases, a permit-required confined space.

Rules for confined space entry for cities in Kansas are administered by the Kansas Dept. of Labor and they follow OSHA regulations. This can be a very lengthy subject. I provided a manual that addresses confined space entry rules and regulations. Here are major points.

A confined space is any place you can enter that is not a normal work environment and has limited means to enter and exit. This would be such as a water tower, crawl space under a house or any tank. A PERMITTED confined space means there is the potential to also present a hazardous atmosphere or other recognized serious safety hazards. These types of confined spaces would include lift stations and manholes due to toxic gasses and the presence of electrical components and sewage.

There are also requirements for fall protection, atmosphere monitoring and lock out/tag out of equipment and electrical components. At least two persons trained in confined space entry need be involved in such accesses: 1) the person entering the space; and, 2) an attendant. A supervisor is also needed, but can be also be either the attendant or entry person or different person making the total needed three persons.

I also understand that if entry is made and someone should be injured or in cases of fatality, some life/health insurances will not pay if proper equipment and training have not been provided.

Your system has several options. The first would be to set a policy that no one enters a confined space, permitted or not. This would mean hiring trained people to provide necessary maintenance. The advantage of this is that the requirements fall on the company to provide needed equipment. Contracted services may be difficult to obtain on weekends or at night. The services could also be more expensive than training and purchasing necessary equipment.

The other option would be to provide training to employees and purchase the needed equipment. The cost could be between \$5,000 and \$10,000 for equipment. These would include harness, tripod with winch, fall protection, 4-gas air monitor and lock out /tag out equipment. In my opinion, this would be best option and would be less expensive. The costs could be split between funds such as half from water and half from sewer. Some system operators are also on fire departments, so the costs could be shared through there too for confined space rescue.

We also discussed the need to possibly add another cell to the treatment system to maintain compliance as a non-discharging permit. The system has 6.8 acres of cell space which holds just over 11 million gallons at 5 feet of operating depth. At a flow rate of 40,000 gallons per day usage, there is 276 days of detention time. The design capacity is 19,000 gallons usage per day, or 583 days detention time. You will need an engineer to determine the exact size cell your system would need. I conservatively figured 4.75 more acres at 8 feet of depth would provide the needed amount to meet original design. Your system may not need this much cell space maintain a non-discharging permit as there is no discharge regularly from the system.

In order to obtain an estimate of costs, I think that a professional engineer is the best source of information for consideration of any additional lagoon space. I calculated that if there was one foot of sludge in your lagoon system it reduces detention time by 55 days. Two feet would reduce 110 days detention time.

Another option may be to become controlled discharge that discharges only between certain months, such as discharging only between October and April. This is still a discharge permit and a Class I operator certificate would be needed.

Please call if you have any questions. KRWA appreciates the opportunity to provide assistance to your system and your support as members.

Sincerely,

Charlie Schwindamann  
Wastewater Tech

CS: ejr

C: Christopher Fuerborn, Mayor  
Helen Holm, KDHE, Lawrence