nal calculation of the percentage amount of rated daily TLWWTF BOD treatment capacity used in December 2017 was 78 percent of TLWWTF's rated BOD treatment capacity of 5,600 pounds of BOD per day. This 78 percent calculation was listed in the TLWWTF December 2017 DMR. After using the changed procedure from 2015 for a re-calculation, as Hanson requested, only 75 percent of rated TLWWTF's rated BOD treatment capacity was used. The 75 percent figure was reported to the state and EPA in a revised TLWWTF December 2017 DMR.

Letter describing TLWWTF's Re-

vised Discharge Monitoring Report *influent BOD calculations for May* 2015 through November 2017: Hanson suggested that Burks submit corrected DMRs for this period using the same new 2015 formula for calculating the percentage of rated BOD treatment capacity used. Burks performed all these recalculations and submitted revised monthly TLWWTF DMRs for each month from May 2015 through November 2017 with the adjusted percentages. See www. ocn.me/v18n3.htm#tlwtf.

Sampling rate increased

After a discussion, the JUC unanimously directed Burks to increase the plant

influent BOD sampling frequency to four times a month, so that if any spikes occurred in a single sample in the future, Burks could show the state that this single sample was anomalous and not a trend that would trigger a state requirement that TLWWTF start designing an expansion for new additional rated BOD treatment capacity. Strom and Gillette reiterated that they would prefer eight samples a month but agreed that the increasing the sample size to four samples per month would

The JUC also directed Burks to ask for help from Tetra Tech, whose engineers designed the plant, and from TL-WWTF's environmental attorney. Gabe Racz of Vranish & Raisch LLP. With that background information, Burks would then be dealing with the state to find out why TLWWTF's permit, which originally rated TLWWTF at 9,600 pounds of BOD per day, had been reduced to 5,600 pounds per day.

Burks said he did not think 5,600 pounds per day was a reasonable number, since TLWWTF was "not like other facilities." He said he thought they had proven right now that the facility can do this with minimal blower input. "And look at our effluent quality!"

The consensus was that Burks would report back to the JUC on the progress about this discharge permit rated BOD capacity question in April.

TENORM and arsenic regulations in flux

Gillette, Burks, and Wicklund discussed Colorado HB-1215, a bill concerning greater protections regarding the disposal of both naturally occurring radioactive materials (NORM) and technologically enhanced naturally occurring radioactive materials (TE-NORM) that is going through the state Legislature now. The intention of this bill is to require CDPHE to adopt rules for appropriate disposal of both NORM and TENORM, which can be contained in the waste products from the oil and gas exploration and production industry. Regular public wastewater treatment facilities such as TLWWTF were also originally included in this bill, but it's not clear if wastewater treatment facilities will be removed now as it goes through the Legislature, Burks said.

Wicklund said this bill could affect TLWWTF if TENORM ended up in TLWWTF's sludge after the Town of Monument removes naturally occurring radium from its drinking water. This proposed removal process creates concentrated TENORM in specialized radium removal filters, then backwashes these radium filters into the MSD sanitary sewer collection system where the TENORM filtrates would become part of the MSD influent to

TLWWTF. These Town of Monument TENORM biosolids would be collected and pumped to the TLWWTF sludge lagoon for about two years of storage. Currently, TLWWTF sludge is dredged out of the lagoon every two years, dewatered, loaded into 18-wheel tractortrailers, then transported to farms and applied to farmland as re-use fertilizer. If this constructive method of Class B sludge re-use as safe agricultural fertilizer was no longer possible, the sludge would have to be sent to a hazardous materials waste dump for radioactive materials instead, a method of disposal that will be extremely more expensive and difficult.

Gillette said the bill is just an effort to develop some kind of state standard, since the Environmental Protection Agency (EPA) has not developed a federal standard yet for the oil and gas industry, and "I think we are on right track as long as we are doing proactive sampling for baseline."

Burks said that TLWWTF still intends to do a baseline influent radium sample in 2018. The JUC had already directed Burks to get this done in 2017, but neither the February or May 2017 influent grab sampling attempts were successful. They need to be done when the town notifies him that its Public Works Department drinking water operators are pumping backwash water from the town's Well 9 sand filter into the MSD collection system. See www. ocn.me/v17n4.htm#tlwfjuc.

Burks said MSD Environmental Compliance Coordinator Jim Kendrick has been attending many meetings and talking with Racz and Justine Beckstrom of Vranish and Raisch to prepare for the upcoming state regulations hearing that could affect TLWWTF in a variety of ways.

One new topic of concern is that the Water Quality Control Division might reduce TLWWTF arsenic limits from 10 micrograms per liter (µg/l) for the state rivers and streams wastewater standard to $0.02 \mu g/l$ for the state's Monument Creek drinking water standard. Burks said TLWWTF puts out 2 μg/l now in its effluent. Wicklund said that the new \$3.6 million total phosphorus chemical clarifier removal system that TLWWTF just built could also help remove more arsenic by changing the types of chemicals used from alum to ferric chloride, but it would still be very difficult to reduce it to $0.02 \mu g/l$.

Kendrick and Burks also continue to participate in monthly meetings of the Arkansas River/ Fountain Creek Coalition for Urban/Rural River Evaluation (AF CURE), which is collecting data and doing studies in the watershed to be able to demonstrate to the CDPHE how effective current wastewa-

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