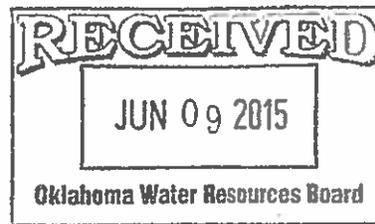




8 June 2015
15-ED-228



CONCRETE
SAND & GRAVEL
STONE
BLOCK
MASONRY

Mr. Kent Wilkins, Assistant Chief
Planning and Management Division
Oklahoma Water Resources Board
3800 North Classen Boulevard
Oklahoma City, OK 73118

**RE: Water Monitoring Plan Report, 1st Quarter 2015, for Dolese Bros. Co. Davis
Quarry, Murray County, Oklahoma**

Dear Mr. Wilkins:

According to the Oklahoma Water Resources Board's Title 785, Chapter 30, Subchapter 15, Part 4, *Mines with Preexisting Exemptions*, Dolese Bros. Co. Davis Quarry qualifies as a mine with a preexisting exemption. As part of maintaining this exemption status, the regulations require us to do the following:

1. Adopt and implement a plan to monitor and report to the Board the accumulation and disposition of pit water during the previous calendar year;
 - The Davis Quarry has adopted and implemented such a plan, and the tables below serve to report to the Board the accumulation and disposition of pit water during 1st Quarter 2015.
2. Make quarterly and annual reports of the measured or reasonably estimated groundwater and surface water volumes, separately stated, entering the pit, of the water that is diverted from the pit, of the disposition of the water from the pit, and of the consumptive use of the water from the pit on or before the deadlines provided by Title 82 of Oklahoma Statutes, § 1020.2(E)(1);
 - The Davis Quarry has continued to fulfill this obligation by compiling and submitting this 1st Quarter 2015 Report. The specific information requested in this section is outlined in the tables shown below.
3. At any time after March 31, 2015, demonstrate to the satisfaction of the Board within the pertinent report or reports that the mine has not consumptively used during the previous twelve-month period, from the mining site, an amount of groundwater which combined with any amounts used from permitted groundwater wells exceeds the MEPS¹. Such demonstration may require providing to the Board a copy of the mine's monitoring plan and all of the data collected and procedures used to support the calculations and results reported.

¹ Mine's Equal Proportionate Share

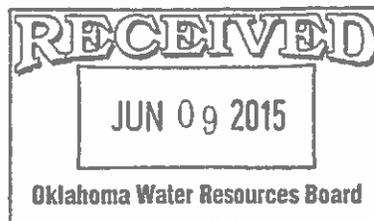
DOLESE BROS. CO.

20 NW 13th Street • P.O. Box 677

Oklahoma City, OK 73101-0677

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dolese.com



- The Davis Quarry is currently willing to demonstrate to the Board that the mine site has not consumptively used during the previous twelve-month period from the mining site, an amount of groundwater which combined with any amounts used from permitted groundwater wells exceeds the MEPS. Additionally, example calculations used in the First Quarterly Monitoring Report for 2013 have already been submitted to the OWRB for review and analysis.

Below, in Tables 1, 2, and 3, please find the 1st Quarter 2015 summary data collected at the Davis Quarry.

Table 1—1st Quarter 2015

ACCUMULATION & DISPOSITION OF PIT WATER Acre-Feet	
Water entering the Mine Pit	
Groundwater	90.24
Surface Water	27.71
Total	117.95
Water diverted from the Mine Pit into Fresh Water Lake (FWL)	
Groundwater	90.24
Surface Water	27.71
Total	117.95
Water removed from Fresh Water Lake (FWL)	
Groundwater	330.92
Surface Water	202.91
Total	533.83
Water returned to Fresh Water Lake (FWL)	
Groundwater	364.74
Surface Water	223.64
Total	588.38
Water returned to Land Surface overlying Arbuckle Simpson Aquifer (ASA) basin	
Groundwater	23.02
Surface Water	14.12
Total	37.14
Water consumptively used	
Groundwater (See Table 3 for calculations)	8.06

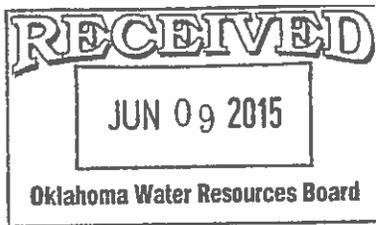


Table 2-1st Quarter 2015

Water Fluctuations in the Fresh Water Lake (FWL)	
Average Size of Lake	30.55 acres
Gain in Water Elevation	0.41 feet
Gain in Lake Volume	12.53 acre-feet

Table 3

Consumptive Use Summary for 1QTR15

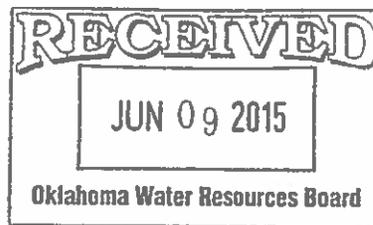
Activity or Location	Amount of Pit Water Used, Acre-Feet	Percent Ground-Water	Groundwater Component, Acre-Feet
1 North Water Well	0.00	All	0.26
2 South Water Well	0.00	All	0.46
3 Material Moisture Hauled from Site	3.71	61.99% *(0.6199)	2.30
4 Land Application for Roadway Dust Suppression	8.10	61.99% *(0.6199)	5.02
5 Evaporation from Mine Pit	0.02	76.51% *(0.7651)	0.02
6 Offsite Dewatering	0.00	0% *(0.0)	0.00
For 1QTR15, Total Groundwater Consumption from ASA at Davis Quarry = 8.06 Acre-Feet			

Below, in Table 4, please find the Groundwater Rights Summary for the Davis Quarry.

Table 4

Groundwater Rights

<p>Davis Quarry Groundwater Rights From Acreage on the Arbuckle-Simpson Aquifer And Included in the ASA Groundwater Rights: (1,083 acres on ASA)*(0.2 ac-ft/acre) = 216.6 acre-feet on the ASA</p> <p>From Acreage off the Arbuckle-Simpson Aquifer And Excluded from the ASA Groundwater Rights: (937 acres off ASA)*(2.0 ac-ft/acre) = 1,874 acre-feet off the ASA</p>
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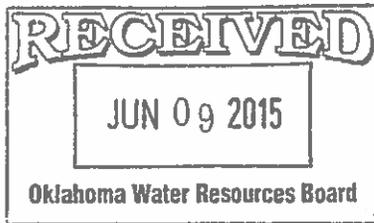


Based on the plan that we have adopted and implemented to monitor and report the accumulation and disposition of pit water, based on our actual consumptive use of groundwater quantities, and based on the timely submittal of this 1st Quarterly Report for 2015, we believe that the Davis Quarry is in full compliance with all of the regulations that allow us to maintain its preexisting exemption.

Our calculation estimates show that Davis Quarry's total groundwater consumption for the First Quarter 2015 was 8.06 acre-feet. We were pleased to learn that this amount equates to only 3.07% of the Davis Quarry's annual Arbuckle Simpson Aquifer (ASA) water rights. For the record, we have 216.6 acre-feet of water rights over the ASA at the Davis Quarry location. Our total available water rights for this site could also include other significant unused water rights that we own at another site that overlies the ASA in Murray County.

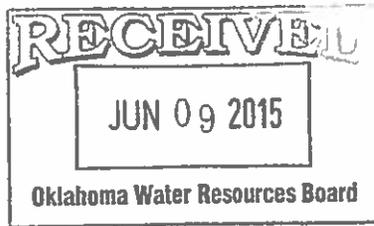
Even though our groundwater consumption is indicated as just a fraction of the quantity we are entitled to, we still firmly believe that this consumptive use figure is greatly overstated. Listed below are some of the reasons why we believe our total groundwater consumption figure is inflated. Many of these reasons have been addressed in detail in previously submitted reports; however, we believe that it is important to recap these items regularly and to address how each reason pertains to the current quarter.

- Low rainfall and runoff amounts into the Mine Pit will make it appear that groundwater concentrations are higher than actual in the Mine Pit (because of the leaking Fresh Water Lake (FWL) situation described in the next bullet-item). During the First Quarter 2015, measured rainfall amounts totaled only 6.3 inches, and runoff from these storm events was estimated at only 1.3 inches. Conversely, significant rainfall and runoff volumes entering the Mine Pit have a tendency to overshadow the leakage of the FWL, making it seem less significant. We will most likely notice this concept during Second Quarter 2015 when the groundwater concentration of the Mine Pit and FWL should plummet to more reasonable, yet still high, levels because of the heavy rainfalls.
- We routinely dewater the working area called the Mine Pit into our water storage lake called the Fresh Water Lake (FWL), yet this FWL has been observed to seep back into the Mine Pit on a continual basis. A photograph of this leakage is shown following this paragraph. We have not currently determined an accurate way to account for the quantity of this seepage; so, to avoid any debate, we currently and reluctantly allow it to be counted as "groundwater seepage" into the Mine Pit. The effects of this seepage on our Mine Pit/FWL groundwater concentrations are magnified during quarters, like First Quarter 2015, that receive minimal rainfall. Every gallon of seepage that re-enters the Mine Pit from the FWL causes the calculated groundwater percentage in the Mine Pit and FWL to appear to be much higher than actual—and then, when we utilize water from this water storage lake (FWL) in our everyday stone processing operations, we are thereby charged with a higher consumption of groundwater than actual.



21 May 2015—Water is leaking from the Fresh Water Lake back into the Mine Pit at Davis Quarry. The water travels through approximately 300-400 feet of in-situ stone before seeping from this high-wall.

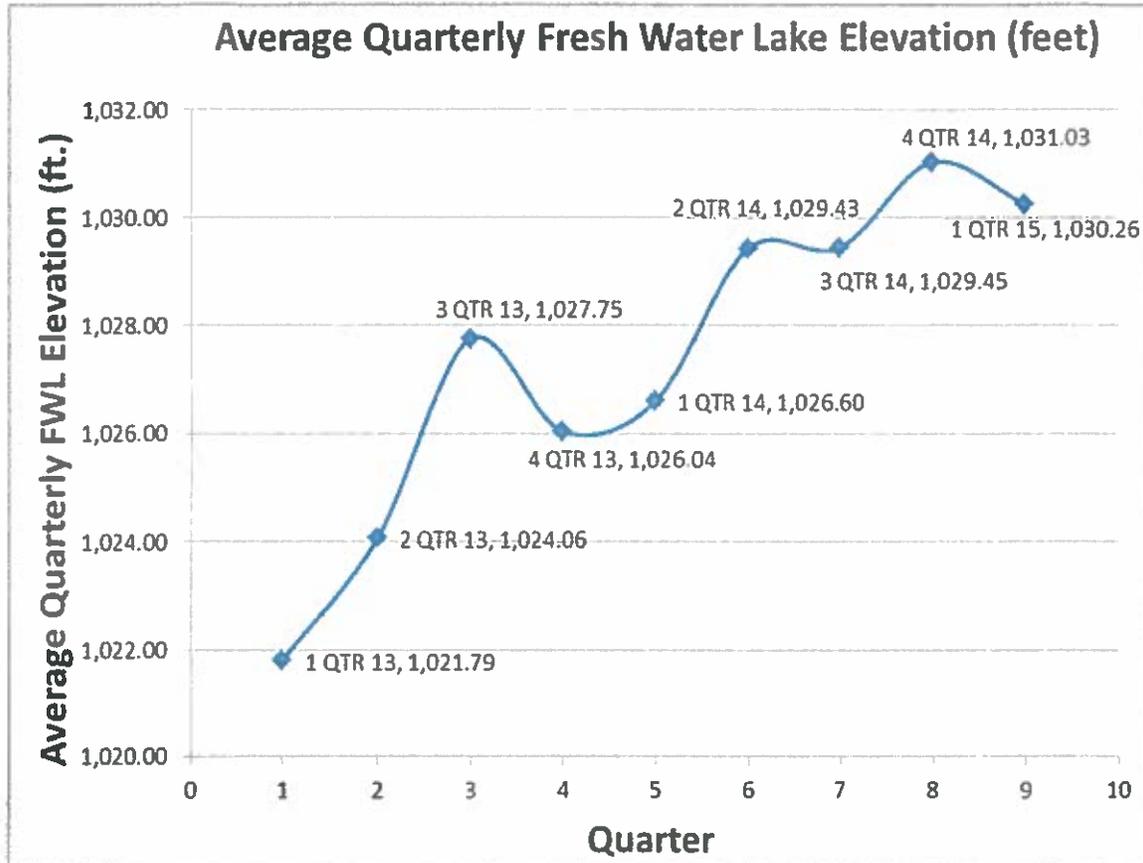
- The debate as to what is truly groundwater entering the Mine Pit versus delayed storm water seepage is somewhat complex. One could argue that if the Mine Pit remained dry as it did during a two-week drought period during a recent summer—that the level of the Mine Pit floor was not beneath the water table level of the ASA. And, similarly, one could argue that once a storm event was received at the site, an initial surge of runoff water would enter the Mine Pit in the first day or two, and then the remainder of the water from the storm (minus losses) would trickle in during the next few weeks—and that this trickle of water was not truly ASA groundwater. Currently, to avoid this debate, we have counted this continual trickle of water from recent storm events as groundwater, even though our current Mine Pit is not likely within the ASA at all.
- Currently, we are within 10 inches of storing the most water ever stored at the Davis Quarry in the Fresh Water Lake, as shown on the following graph. The reason for this increased water storage is that we have attempted to hold as much water (blended



Mr. Kent Wilkins
Oklahoma Water Resources Board
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Water Monitoring Plan Report
1st Quarter 2015
for Dolese Bros. Co. Davis Quarry
Murray County, Oklahoma

water) as possible in our FWL to avoid its being discharged—and then being counted as consumption (specifically, the groundwater portion of the blend).



Please contact me if you have any questions or comments concerning this submittal. Thank you.

Sincerely,
DOLESE BROS. CO.

Daniel E. Becker

Daniel E. Becker, P.E.
Environmental Engineer

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