



*Corporate Environmental Affairs*

September 26, 2014

Oklahoma Water Resources Board  
3800 N. Classen  
Oklahoma City, OK 73118  
(405) 530-8800

**RE: Consumptive Water Use Report – Quarter 2, 2014  
Mine L.E.-1565 – Unimin Corporation – Roff Facility**

Dear Sir or Madam:

Enclosed please find Unimin's consumptive water use report for the second quarter of 2014. As noted on the attached worksheet, the plant remains below our allocated equal proportionate share.

If you have any questions or require any additional information, please contact myself or Don Russell at (580) 456-7772.

Respectfully,

A handwritten signature in blue ink that reads "Darryl Patrick".

Darryl Patrick  
QC/Safety and Health Supervisor

Attachments

CC: Plant  
IRO

# Consumptive Use of Pitwater Worksheet

Enter Values in Yellow

## Pit Groundwater Volume

Amount (gallons)

- 1 Total volume of water pumped from the producing mine pit(s)
- 2 Volume of precipitation that falls onto the surface of water in the producing mining pit(s)
- 3 Portion of total precipitation that flows over the land surfaces that drains into the mine pit water
- 4 Other non-pit waters pumped from the producing mine pit
- 5 Add lines 2 through 4
- 6 **Pit Groundwater Volume (Line 1 - Line 5)**

16,357,900  
19,222,677  
0  
0  
19,222,677  
-2,864,777

Rainfall: 12.99 (inches)

Area of Pit: 54.5 (acres)

## Defined Elements of Consumptive Use

Amount (gallons)

- 7 Volume of pit water that is driven off (by drying) the mined material transported off the mine site
- 8 Volume of pit water that is carried away with the mined material transported off the mining site (shipped)
- 9 Volume of pit water that evaporates from the producing mine pit, process water ponds, and lined ponds (excluding structures used for augmentation)
- 10 Volume of pit water that is used for other beneficial uses off the mine site
- 11 **Defined Elements of Consumptive Use of Pit Groundwater (add Lines 7 through 10)**

3,246,826  
0

5.0

Tons Mined: 271,110

## Pit Groundwater Balance

Amount (gallons)

- 12 Line 6 minus Line 11
- 13 **Groundwater Augmentation** (Volume of pit groundwater returned to the groundwater basic or sub basin)
- 14 **Stream Augmentation** (Volume of pit groundwater discharged to a definite stream, during flow conditions that are less than or equal to 50% exceedance or median historic flows)
- 15 **Precipitation & Run-off** (Volume of precipitation and surface run-off into a recharge pit or holding pond used for augmentation)
- 16 **Additional Discharge** (Volume of pit groundwater discharged to a definite stream, not meeting stream augmentation credit criteria)
- 17 **Recycled Pit Groundwater** (Volume of pit groundwater returned to a mine pit or holding basin not included on lines 7 through 10)
- 18 **Other Non-Consumptive Losses** (Including pit groundwater returned to the land surface from which surface run-off flows into a mine pit, and other losses not included in lines 7 through 10)
- 19 Add lines 13 through 18
- 20 **Other Consumptive Use (adjusted)** Line 12 minus 19

557,767  
0  
3,804,594

ASHRAE Evaporation Model

A: 95 (mi/hr)  
B: 37.4 (in-Hg)  
V: 5 (in-Hg)  
Pw: 0.69 (in-Hg)  
Pa: 0.522 (Btu/lb)  
Hv: 970.4 (acre)  
Evap Area: 10

CREDITS

-6,669,371  
0  
0  
0  
0  
0  
-6,669,371

## Total Reported Consumptive Use Of Pit

Amount (gallons)

Total Reported Consumptive Use Of Pit (add Line 11 and Line 20)

-2,864,777

Facility's Equal Proportionate Share (EPS)

62,693,815

at

0.2

acre-feet

for

962 acres