



*Corporate Environmental Affairs*

December 28, 2015

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

**RE: Consumptive Water Use Report – Quarter 3, 2015  
Mine L.E.-1565 – Unimin Corporation – Roff Facility**

Dear Sir or Madam:

Enclosed please find Unimin's consumptive water use report for the third quarter of 2015. 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 black ink, appearing to read "R. Amiri Alexander".

R. Amiri Alexander  
Quality Control / Mine Supervisor

Attachments

CC: Plant  
IRO

# Consumptive Use of Pitwater Worksheet

Enter Values in Yellow

## Pit Groundwater Volume

1	Total volume of water pumped from the producing mine pit(s)	Amount (gallons)	86,599,745			
2	Volume of precipitation that falls onto the surface of water in the producing mining pit(s)	Amount (gallons)	24,185,756	Area of Pit: 61.9 (acres)	Rainfall: 14.39 (inches)	
3	Portion of total precipitation that flows over the land surfaces that drains into the mine pit water	Amount (gallons)	0			
4	Other non-pit waters pumped from the producing mine pit	Amount (gallons)	24,185,756			
5	Add lines 2 through 4	Amount (gallons)	62,413,989			
6	Pit Groundwater Volume (Line 1 - Line 5)	Amount (gallons)	24,185,756			

## Defined Elements of Consumptive Use

7	Volume of pit water that is driven off (by drying) the mined material transported off the mine site	Amount (gallons)	2,950,479	Tons Mined: 247,200	% Moisture: 5.0	
8	Volume of pit water that is carried away with the mined material transported off the mining site (shipped)	Amount (gallons)	0			
9	Volume of pit water that evaporates from the producing mine pit, process water ponds, and lined ponds (excluding structures used for augmentation)	Amount (gallons)	557,767	ASHRAE Evaporation Model	A: 95	
10	Volume of pit water that is used for other beneficial uses off the mine site	Amount (gallons)	0	B: 37.4		
11	Defined Elements of Consumptive Use of Pit Groundwater (add Lines 7 through 10)	Amount (gallons)	3,518,246	V: 5		(e-h) (ft)

## Pit Groundwater Balance

12	Line 6 minus Line 11	Amount (gallons)	58,895,743	Pw: 0.69	(i-h) (ft)	
13	Groundwater Augmentation (Volume of pit groundwater returned to the groundwater basin or sub basin)	Amount (gallons)	0	Pa: 0.522	(i-h) (ft)	
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)	Amount (gallons)	0	Hv: 970.4	(i-h) (ft)	
15	Precipitation & Run-off (Volume of precipitation and surface run-off into a recharge pit or holding pond used for augmentation)	Amount (gallons)	0	Evap Areas: 10	(i-h) (ft)	(acre)

## CREDITS

16	Additional Discharge (Volume of pit groundwater discharged to a definite stream, not meeting stream augmentation credit criteria)	Amount (gallons)	0			
17	Recycled Pit Groundwater (Volume of pit groundwater returned to a mine pit or holding basin not included on lines 7 through 10)	Amount (gallons)	0			
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)	Amount (gallons)	0			
19	Add lines 13 through 18	Amount (gallons)	0			
20	Other Consumptive Use (adjusted) Line 12 minus 19	Amount (gallons)	58,895,743			

## Total Reported Consumptive Use Of Pit

21	Total Reported Consumptive Use Of Pit (add Line 11 and Line 20)	Amount (gallons)	62,413,989	0.2	acre-feet	for	962	acres
	Facility's Equal Proportionate Share (EPS)	Amount (gallons)	62,413,989	at				

