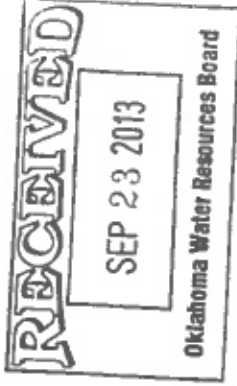


**Meridian Aggregates
North Troy Quarry
Water Management and Conservation Plan**



Characterization of Area and Site Plan

See Appendix A.

Facility Layout/Water Flows

See Appendix B.

Estimated Flows

Pit Water To Holding Basins and Groundwater Infiltration Areas	3,300 gpm
Pit Water To Stream Augmentation Points	2,300 gpm
Holding Basin To Plant	5,000 gpm
Return Flow From Plant	4,800 gpm
Stream Water Diversion From Mill Creek	2,000 gpm

Water Schematic

See Appendix C.

Augmentation of Stream water and/or Groundwater

1. Under normal conditions, excess pit water will be diverted to onsite infiltration areas (See Appendix A) for ground water recharge. Records of the infiltration test for each area are attached (See Appendix E). If additional infiltration areas are added, the infiltration tests results will be included in the quarterly report following the test.
2. Groundwater augmentation is accomplished by pumping pit water to one of three groundwater augmentation areas. The water pumped to these areas is metered as it leaves the pit and the beginning and ending meter readings, the start/stop date and time, and destination of the water are logged on a pump log sheet. With the exception of rainfall and/or evaporation, no water is removed or added from other sources. Thus the metered amount pumped to those areas is the volume of groundwater augmentation reported for augmentation credits.
3. Excess pit water may be diverted to Mill Creek, either via an unnamed tributary or via Warren Pond (See Appendix C). Stream augmentation will be based on an evaluation of stream flow conditions at that time, and may or may not take priority over groundwater augmentation.
4. If consumptive use of groundwater from the pit and permitted groundwater wells exceeds the EPS, then the volumes of pit water used for augmentation of stream flow or groundwater may be credited against the consumptive use above the Equal Proportionate Share.
5. Credits for the stream augmentation of Mill Creek will be allowed as permitted under applicable law. The USGS Streamstats program is used to determine the Median Flow for Mill Creek at the bridge on Cyrus-Harris Road. The value given by Streamstats is 9.09 cfs. This will be used as the maximum flow for which augmentation credits can be obtained.
6. The Mill Creek Stream Gage will be used to determine if the flow in Mill Creek is below the limit for stream augmentation credits for that day. Quarry operations sometimes require that pit dewatering continue 24 hours per day. On these occasions, if there has not been recordable precipitation at the stream gage, it will be presumed that the unaltered stream flow is still below the augmentation limit.

7. Sample Stream Augmentation Data

Mill Creek 2013 Augmentation and Gage Data

Start Date	Stop Time	Start Date	Stop Time	Begin Reading	End Reading	As-B Pumped	Mill Creek Stream	Gage Reading	Time Read	Stream Height	Stream Flow
11/20/13	12:30pm	11/20/13	4:30pm	2,142,370.000	2,148,020.000	1.04	UG:05	731.000	1:30 PM CST	5.82 ft	1.4 ft
11/20/13	3:30pm	11/20/13	4:30pm	2,142,370.000	2,148,020.000	4.30	UG:05	731.000	7:30 AM CST	5.96 ft	3.5 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	4.20	UG:05	731.000	8:00 AM CST	5.83 ft	1.6 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	14.64	UG:05	731.000	6:00 AM CST	5.81 ft	1.6 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	1.21	UG:05	731.000	12:30 AM CST	5.75 ft	0.86 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	2.58	UG:05	731.000	10:28:17.00 PM CST	5.87 ft	2.0 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	2.84	UG:05	731.000	7:00 PM CST	5.87 ft	2.0 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	2.64	UG:05	731.000	10:30:01.17 AM CST	5.87 ft	2.0 ft
11/20/13	4:00pm	11/20/13	4:30pm	2,148,020.000	2,148,020.000	1.03pm	UG:05	731.000	10:30:01.23 AM CST	5.76 ft	1.1 ft
2/2/2014	3:00pm	2/2/2014	3:45pm	2,187,880.000	2,193,810.000	17.56	UG:05	731.000	8:30 AM CST	5.73 ft	0.73 ft
2/6/2014	3:00pm	2/6/2014	3:45pm	2,193,810.000	2,194,960.000	2.82	UG:05	731.000	8:30 AM CST	5.74 ft	0.79 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,194,960.000	2,195,690.000	3.41	UG:05	731.000	8:30 AM CST	5.73 ft	0.73 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,195,690.000	2,197,270.000	2.52	UG:05	731.000	8:00 AM CST	5.80 ft	2.0 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,197,270.000	2,198,050.000	4.73	UG:05	731.000	6:00 AM CST	5.69 ft	2.3 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,198,050.000	2,203,180.000	15.16	UG:05	731.000	10:30 AM CST	5.85 ft	1.6 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,203,180.000	2,204,110.000	4.76	UG:05	731.000	21:10:01.17 AM CST	5.79 ft	1.2 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,204,110.000	2,204,110.000	4.76	UG:05	731.000	21:32:01.17 AM CST	6.0 ft	4.4 ft
2/11/2014	3:00pm	2/11/2014	3:45pm	2,204,110.000	2,204,110.000	4.76	UG:05	731.000	8:30 AM CST	5.98 ft	3.9 ft

8. All volumes of pit water used for augmentation will be reported on the quarterly and annual reports submitted to the OWRB.

Water Rights Information

Permits are included in Appendix D.
Groundwater Rights

1. Meridian Aggregates Permit 2002-602 – 700 acres @ 4.7 inches per year, 274 acre-feet
 2. Meridian Aggregates Permit 2006-601A - 268.83 acres @ 4.7 inches per year, 105.29 acre-feet
 3. Meridian Aggregates Permit 2006 – 601B – 550.03 acres @ 4.7 inches per year, 215.43 acre-feet
- Stream water Rights
1. Meridian Aggregates Permit 2004-033 – 1,425 acre-feet per year

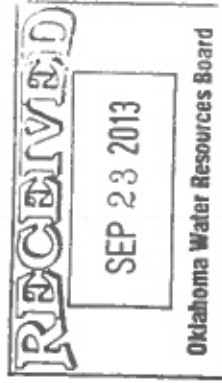
Consumptive Use of Pit Water

1. Material transported off site – moisture content is determined based on in-house quality control testing by MMM personnel. Materials are grouped into three categories – base products, coarse aggregates (>3”), and fine aggregates (< ½”). Average moisture contents are determined for each category based on the previous year’s testing. These moisture contents are then used to determine the monthly volume of water transported offsite.
2. Evaporative losses – net evaporation from the pit sumps and gross evaporation from ponds not used for groundwater augmentation is measured with an onsite weather station. In the event the weather station fails to record the data, then OWRB average evaporation rates are used for that period.
3. Plant dust control – dust control is accomplished by spray nozzles that spray directly onto the product. The water consumed by dust control becomes a part of the product moisture content and is charged as such.
4. Plant wash water – there are numerous hoses throughout the plant used to wash buildup off material off of the concrete slabs and out from under equipment. This water flows onto the ground and is absorbed back into the ground, thus it is returned to the basin and is not charged as consumptive use.
5. Miscellaneous onsite beneficial use – currently there are no uses of water that fall in this category.
6. Haul road dust control – the number of loads of water used during a given month are logged. This count is multiplied by the volume of the truck to determine the volume of water consumed. This volume will typically be small due to the use of dust control agents at the facility.

Meridian Aggregates

North Troy

Revised 9/13/13



7. Miscellaneous beneficial uses offsite – during periods of drought, the facility assists neighboring landowners by providing water for livestock, after notifying OWRB of such intent. This volume is reported as consumptive use. Water for firefighting is also supplied as needed during wildfire seasons. This volume is also reported as consumptive use, but prior notification is usually not practical.

Consumptive Use	Estimated Annual Volume, ac-ft.
Moisture content of material transported offsite	30
Evaporative losses	25
Haul road dust control	4
Miscellaneous onsite beneficial uses	0
Miscellaneous offsite beneficial uses	1
Total Estimated Consumptive Use	60

Determination of Water Amounts

Groundwater Entering the Pit – determined by measuring the change in the west sump volume during the monitoring period plus the volume of groundwater pumped out of the pit. This change in volume is reported in the column labeled "Total Groundwater Entering The Pit" in the quarterly monitoring report. The change in volume is determined by multiplying the difference in the surface elevation at the beginning of the month and the end of the month and multiplying this difference by the surface area of the sump. This value, in cubic feet, is then converted to acre-feet for entry into the quarterly report.

Example: $((H1-H2)*SA)/43,560 = V$

H1=beginning water elevation, feet

H2=ending water elevation, feet

SA=sump surface area, square feet

V=volume change, acre-feet

Surface Water Entering the Pit – Calculated by use of the NH-4 Runoff Formula and precipitation data from the onsite weather station. See sample data and formulas in Appendix F.

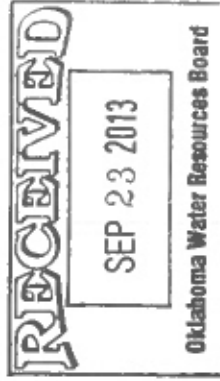
Water diverted from the Pit – water diverted from the pit is metered and the beginning and ending meter readings are recorded by plant personnel. Occasionally, it is necessary to fill the water truck directly from the pit. These loads are reported on a daily water truck log.

Disposition of Pit Water – destination of water diverted from the pit is recorded along with the meter readings.

Consumptive Use of Pit Water – the moisture content of materials shipped off site is determined by MMM Quality Control personnel.

Estimated Annual Volumes (based on 2012 data)

Total Groundwater Entering Pit, Ac-ft	1,340 ac-ft
Total Storm Water Entering Pit	132 ac-ft
Total Pit Water Diverted	1,472 ac-ft
Pit Water Sent to Holding Basins	171 ac-ft
Pit Water Used For Groundwater Augmentation	524 ac-ft
Pit Water Used For Stream Water Augmentation	778 ac-ft



Hydrologic Monitoring

1. Meridian Aggregates' monitoring plan will comply with the requirements of 82 O.S. 1020.2.E.1., i.e., the plan will provide for the measurement or reasonable estimation of groundwater and surface water, separately stated, entering the pit, the water diverted from the pit, the disposition of the water from the pit, and the consumptive use of water from the pit, and quarterly and annual reports will be filed per the statute.
2. In addition, due to pre-existing agreements, Meridian Aggregates is already monitoring and will continue to monitor and report the following:
 - a) Precipitation and evaporation data will be taken from a weather station located at the mine office. In the event of equipment failure or loss of data, precipitation data will be taken from the USGS station located at the Mill Creek Bridge on the Cyrus-Harris Road. In the case of missing evaporation data, OWRB average evaporation values will be used for that period.
 - b) Depth-to-groundwater monitoring is conducted at four wells per requirements of Temporary Groundwater Permit #2002-602 and is subject to change with review and approval of the Technical Review Committee as established by the settlement agreement with the National Park Service and the US Fish and Wildlife Department. Well #2002-602 is located on the mine property, and Well #104806 is located northwest of the mine property. These two wells are monitored in-house by Meridian. Well #92477 and Well #92479 are monitored by the USGS under a contract sponsored by Meridian. Data from the wells will be submitted with the quarterly and annual reports.
 - c) Stream water monitoring is conducted on Pennington Creek by the USGS under the above mentioned permit and agreement. Mill Creek is voluntarily monitored by MMM in cooperation with USGS at the bridge on Cyrus-Harris Road. This monitoring can cease at any time at MMM's discretion. Data from both stream gauges will be submitted with the quarterly and annual reports.

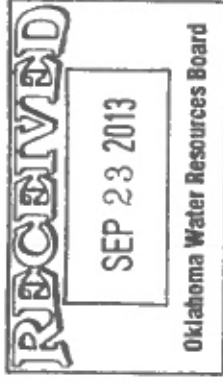
Quality Assurance Plan

1. Onsite weather station – the station is calibrated and maintained in accordance with the manufacturer's recommendations contained in the manuals provided with the weather station.
2. Meters – flow meters will be checked annually by the supplier's representative for accurate flow using industry accepted equipment and practices.
3. Product moisture contents – moisture content testing is performed by MMM personnel following ASTM, ODOT, TxDOT, FAA, and USACOE standard testing procedures. An example of the applicable ASTM Standard Procedure used is ASTM D2216-10.
4. Transducers used for monitoring groundwater levels are checked monthly by using a depth-to-water measuring tape to verify the transducer reading. If the two readings differ by more than 0.2', then the transducer recalibrated to the correct depth as determined by the depth-to-water tape.

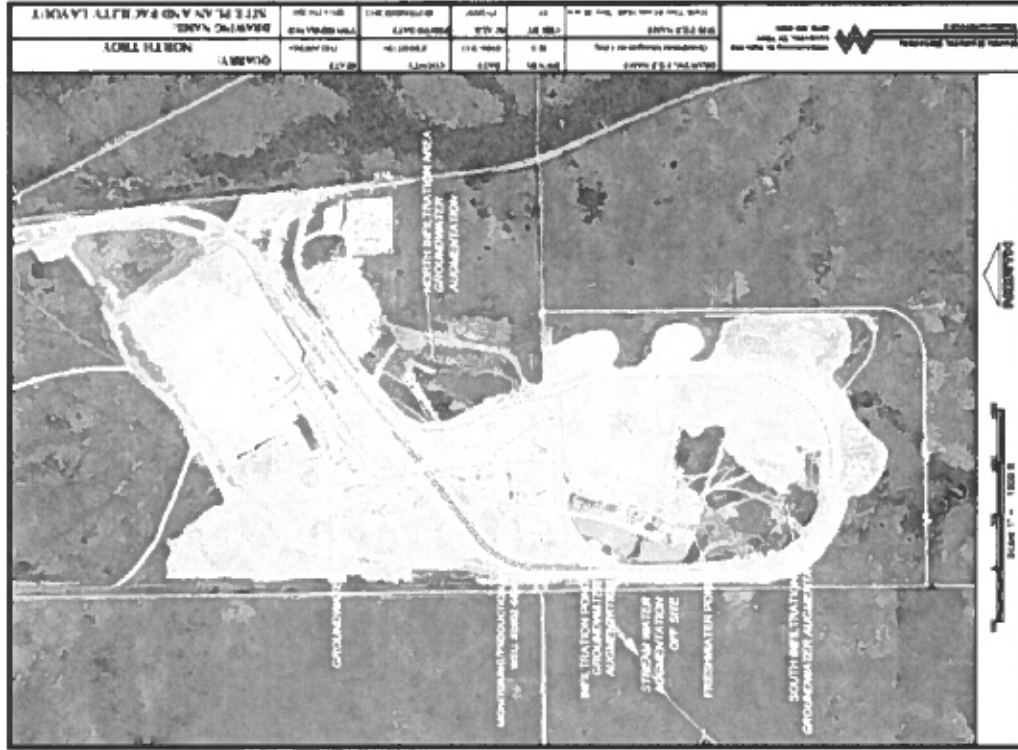
Meridian Aggregates

North Troy

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**Appendix A
Site Plan and Facility Layout**



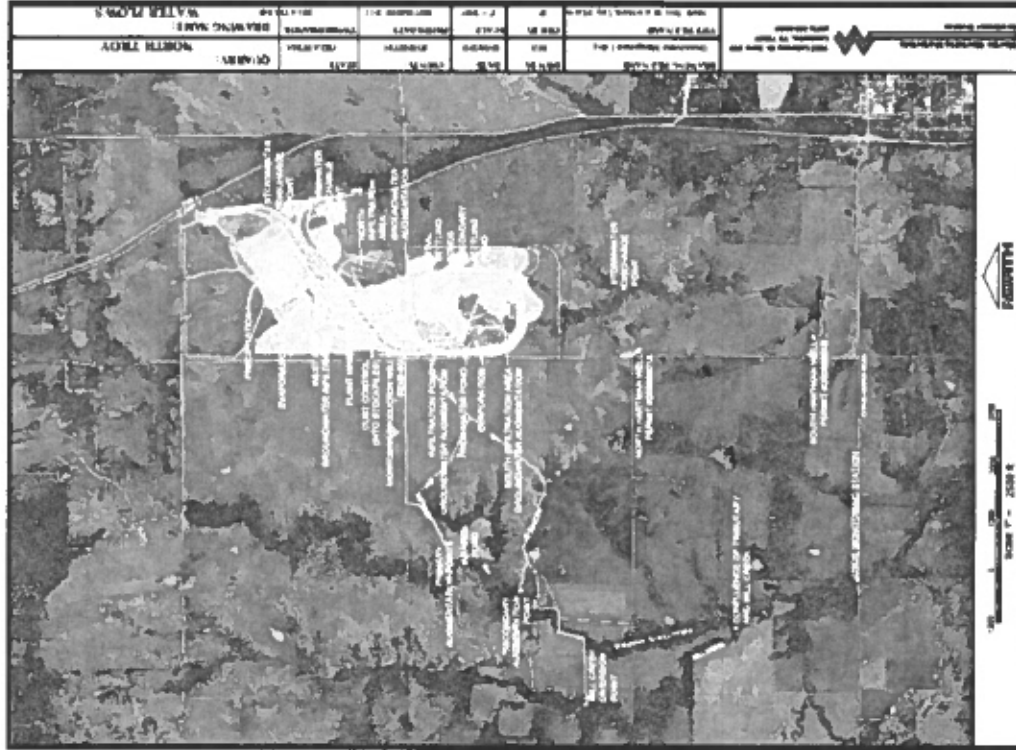
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DRAWING NAME: SITE PLAN AND FACILITY LAYOUT	DATE: 09/13/13	PROJECT: NORTH TROY

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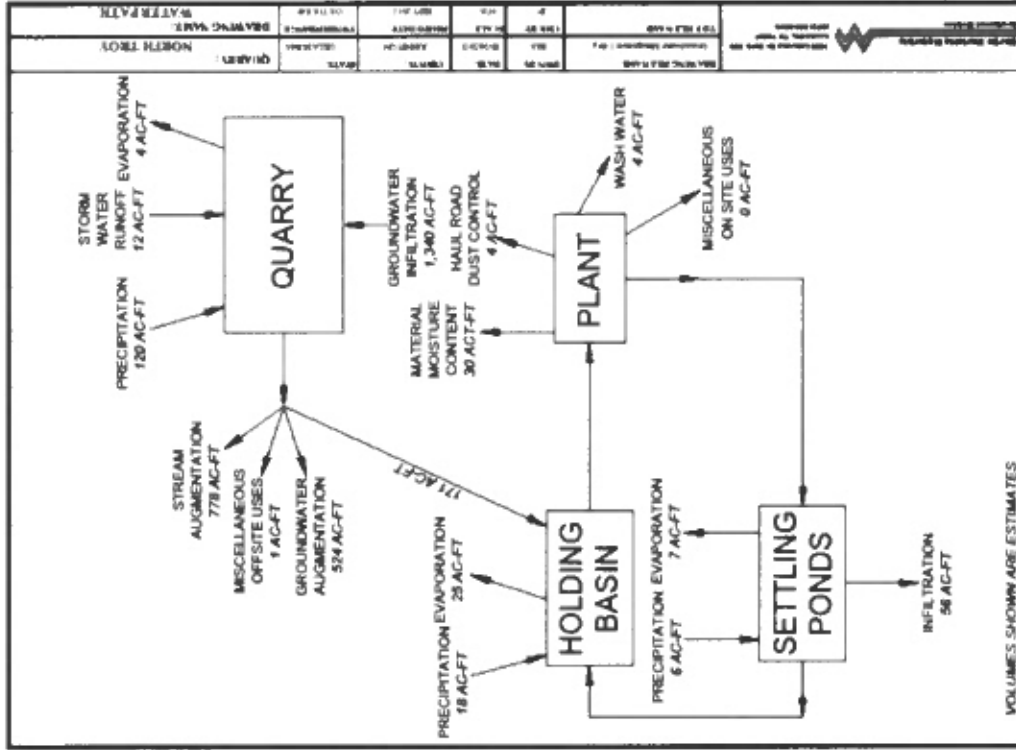
Oklahoma Water Resources Board

**Appendix B
Water Flows**



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Appendix C
Water Schematic



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Appendix D Water Permits

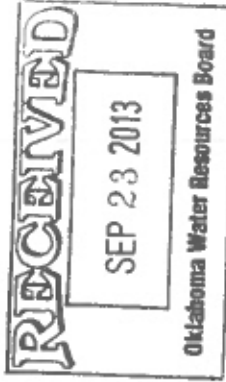
OKLAHOMA WATER RESOURCES BOARD TEMPORARY PERMIT TO TAKE AND USE GROUNDWATER

Permit No. 2012-682
Date of Issue: November 18, 2012
County: Johnston
Groundwater Basin: Ardmore-Simpson

The OKLAHOMA WATER RESOURCES BOARD hereby issues temporary groundwater permit number 2012-682 in the name of Meridian Aggregates, Company, L.P. Limited Partnership whose address is Two Enterprise Blvd., Suite 600, 4002 FF-19 North Star Avenue, Dallas, TX 75220 the permit authorizes the taking and use of 214 acre feet of groundwater per calendar year from well located in the 001-366 of Section 26, T12N, R18E, S27R06 County for the purpose of subgrade with 3M 803 548 2012. The land dedicated to the permit is 102.2 acres and is located at Lot 24, Section 26, T12N, R18E, S27R06 and 130.800 of Section 26, T12N, R18E, S27R06.

This allocation is subject to the following terms, conditions and limitations:

1. This permit shall apply unless it is voluntarily surrendered annually by the permit holder. (Permit) returns to the state-owned water table upon which is created by the Board in January of each year, regardless the temporary permit for the year.
2. This permit shall expire four months of a regular permit after completion by the holder of the application groundwater test study and other studies of the permit area.
3. Changes in well locations, well casing sizes shall be approved by the Board in writing, in the future, be subject to well logging orders of the Board.
4. If a proposed well is not drilled and completed within one year of approval of the well location, groundwater use no longer be authorized to be withdrawn from that location.
5. The use of groundwater authorized by this temporary permit may be used only as intended to support water supplied by Mill Creek and a primary well in the area.
6. The Board may, at its discretion, suspend the permit if the permit holder fails to comply with the terms, provisions and conditions of the permit.
7. Major Aggregates shall monitor and record the groundwater as to each production well in the following manner:
 - (a) From one well, February 15, 2012. Major Aggregates shall conduct monthly monitoring to be taken once each week, by a person acceptable to the Board's Executive Director, from 10 the monitor well in the SE 1/4 of the SW 1/4 of the SW 1/4 of Section 26-14.
 - (b) Any groundwater that infiltrates into the existing well and (c) the production well in the SW 1/4 of the SW 1/4 of Section 26-14. On the date of the monitoring, Major Aggregates shall report to the Board's Executive Director, in writing, the results of the monitoring.
 - (c) Major Aggregates shall cause all samples to be analyzed for TPH using method 8240 for qualitative and quantitative hydrocarbons between C₁ and C₁₀ (which includes gasoline, diesel and kerosene). The samples shall be analyzed by a lab certified by DEQ and accredited in the Board's Executive Director.
 - (d) The methodologies and protocols to used in the monitoring and analysis shall be acceptable to the Board's Executive Director.
 - (e) Major Aggregates shall cause all monitoring data to be reported to the Board on or before the 15th day after the monitoring data is collected.
 - (f) The records will be made available to the public as provided by the Oklahoma Open Records Act, 51 O.S. § 24A.1 and following.
 - (g) If any sample analysis shows the presence of TPH, then Major Aggregates shall immediately consult with the Board staff, develop a remediation plan acceptable to the Board's Executive Director.



Appendix D (cont'd)
Water Permits

OKLAHOMA WATER RESOURCES BOARD
REGULAR PERMIT TO APPROPRIATE STREAM WATER

Steven Corder, Water Quality Plans
Member, SWRB
County: Jackson
Permit No.: 2004-033
Date Filed: October 26, 2004

The OKLAHOMA WATER RESOURCES BOARD hereby issues its regular stream water permit number 8046-303 in the name of Meridian Aggregates, Company, L.P., whose address is 11667 Hampton Road, Suite 200, State Avenue, TX 79032. The regular permit authorizes the taking and use of 1,425 acre-feet of water per calendar year for pit-bog stabilization between 2004 and 2009. The operations will be located on 280 acres described as follows: S.1/4 Sec. 28 and 289 1/4 Sec. 18, in the NE 1/4 of Section 18, in T.16S, R.10E, N.43E, Jackson County. The water is to be diverted from one point of diversion on US-60 (Carr) to the SE 1/4 of Section 14, T.16S, R.10E, Jackson County at a rate not to exceed 5,000 gallons per minute.

The permit holder is authorized to proceed with the construction of the project in compliance with the applicable SWRB permit, and subject to the following terms, conditions and limitations:

1. The use of water authorized under this permit shall not interfere with domestic or existing agricultural uses.
2. Construction of the proposed project must be started by the 15th day of September, 2005, and the permit holder has until the 15th day of December, 2011, to complete the project.
3. Upon completion of the project, permit holder must file with the Oklahoma Water Resources Board a Notice of Completion of Project.
4. Permit use reports related to the permit holder during January of each year shall be prepared and returned to the Board within 30 days. Written notice to terminate and return the report with the maintenance fee may be transmitted by the Board in the event of water under this permit, and
5. The authorized amount of water is subject to forfeiture and must be immediately called in a calendar year when any seven consecutive year period to retain the authorization.

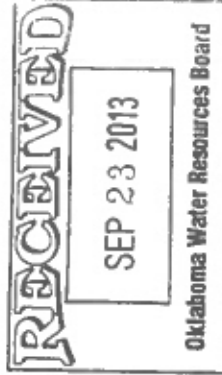
Applicants of this permit shall be an accredited agent and agreement that permit holder will comply with all the terms, conditions and limitations enclosed in this permit and all applicable laws of the State of Oklahoma and Rules, Regulations and Modes of Procedure of the Board.

Date approved: December 1, 2004

OKLAHOMA WATER RESOURCES BOARD

Dorey A. Smith
Dorey A. Smith, Executive Director

SWRB PERMIT NO. 2004-033



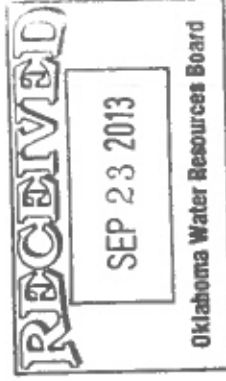
**Appendix E
Infiltration Tests**

Infiltration Pond

Test Date	12/17/2012
Start Time	12/17/12 10:15 am
Stop Time	12/18/12 10:15 am
Test Duration, hrs.	24.0
Start Level, in.	15
Stop Level, in.	8.25
Water Level Change, in.	6.75
Pond Width, ft.	300
Pond Length, ft.	600
Total Volume Change, ac-ft	2.324
Evaporation, in.	0.079
Evaporation Loss, Ac-ft	0.027
Net Volume Change, ac-ft.	2.297
Net Rate of Change, ac-ft/day	2.297

Settling Cell FO2 East

Test Date	12/15/2012
Start Time	12/15/12 7:30am
Stop Time	12/16/12 7:30am
Test Duration, hrs.	24.0
Start Level	24
Stop Level	21.375
Water Level Change, in.	2.625
Pond Width, ft.	50
Pond Length, ft.	330
Total Volume Change, ac-ft	0.083
Evaporation, in.	0.03
Evaporation Loss, Ac-ft	0.001
Net Volume Change, ac-ft.	0.082
Net Rate of Change, ac-ft/day	0.082

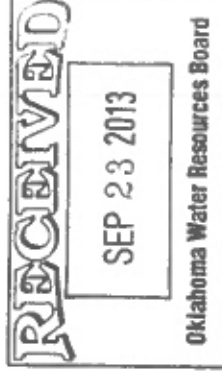


Settling Cell FO2 West

Test Date	5/28/2013
Start Time	5/28/13
Stop Time	4:30pm
Test Duration, hrs.	5/29/13
Start Level	7:30am
Stop Level	15.0
Water Level Change, in.	24
Pond Width, ft.	19.75
Pond Length, ft.	4.25
Total Volume Change, ac-ft	50
Evaporation, in.	350
Evaporation Loss, Ac-ft	0.142
Net Volume Change, ac-ft	0.09
Net Rate of Change, ac-ft/day	0.003
	0.139
	0.223

Settling Cell FO3/FO4

Test Date	12/15/2012
Start Time	12/15/12
Stop Time	7:30am
Test Duration, hrs.	12/16/12
Start Level	7:30am
Stop Level	24.0
Water Level Change, in.	24
Pond Width, ft.	23.75
Pond Length, ft.	0.25
Total Volume Change, ac-ft	200
Evaporation, in.	435
Evaporation Loss, Ac-ft	0.042
Net Volume Change, ac-ft	0.09
Net Rate of Change, ac-ft/day	0.015
	0.027
	0.027

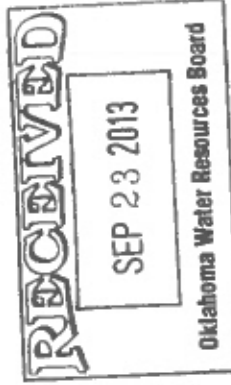


North Infiltration Area

Test Date 1/31/2013
Start Time 1/30/12 4:00pm
Stop Time 1/31/13 8:00am
Test Duration, hrs 16.0
Start Level 24
Stop Level 20.5
Water Level Change, in. 3.5
Pond Width, ft. 30
Pond Length, ft. 600
Total Volume Change, ac-ft 0.121
Evaporation, in. 0.03
Evaporation Loss, Ac-ft 0.001
Net Volume Change, ac-ft. 0.119
Net Rate of Change, ac-ft/day 0.179

South Infiltration Area

Test Date 12/29/2012
Start Time 12/29/12 9:00am
Stop Time 12/30/12 9:00am
Test Duration, hrs 24
Start Level 24
Stop Level 23
Water Level Change, in. 1
Pond Width, ft. 300
Pond Length, ft. 600
Total Volume Change, ac-ft 0.344
Evaporation, in. 0.03
Evaporation Loss, Ac-ft 0.010
Net Volume Change, ac-ft. 0.334
Net Rate of Change, ac-ft/day 0.334



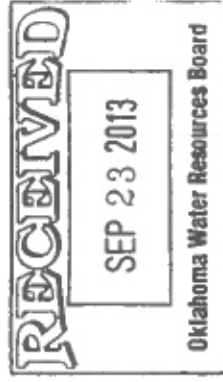
**Appendix F
Precipitation, Evaporation, and Storm water Runoff Data**

January Precipitation/Evaporation Data

PIT RUNOFF ASSUMPTIONS		D		
Hydrologic Soil Group		"gravel road"		
Land Use		H (in)		
AMC Condition		88		
CN (pit fringe)		100		
S (pit fringe)		1.363636364		
S (pit)		0		
Pit - Direct Interception (>96 ft deep)		53.91		
Pit fringe (area drains to pit)		122.04		
Drainage to Pit (total area)		175.95		
Composite RCN				
Date	Precip, in.	Quarry area Runoff, in.	Fringe area Runoff, in.	Daily Evaporation, in.
1-Jan	0.01	0.01	0.00	0.023
2-Jan		0.00	0.00	0.042
3-Jan		0.00	0.00	0.059
4-Jan		0.00	0.00	0.042
5-Jan		0.00	0.00	0.059
6-Jan		0.00	0.00	0.097
7-Jan		0.00	0.00	0.071
8-Jan	0.27	0.27	0.00	0.039
9-Jan	0.45	0.45	0.00	0.028
10-Jan	0.12	0.12	0.00	0.054
11-Jan		0.00	0.00	0.113
12-Jan	0.23	0.23	0.00	0.041
13-Jan		0.00	0.00	0.071
14-Jan		0.00	0.00	0.077
15-Jan		0.00	0.00	0.037
16-Jan		0.00	0.00	0.079
17-Jan		0.00	0.00	0.101
18-Jan		0.00	0.00	0.1
19-Jan		0.00	0.00	0.092
20-Jan		0.00	0.00	0.09
21-Jan		0.00	0.00	0.103
22-Jan		0.00	0.00	0.084
23-Jan		0.00	0.00	0.095
24-Jan		0.00	0.00	0.053
25-Jan		0.00	0.00	0.071
26-Jan	0.01	0.01	0.00	0.02
27-Jan		0.00	0.00	0.022
28-Jan		0.00	0.00	0.077
29-Jan		0.00	0.00	0.047
30-Jan		0.00	0.00	0.106
31-Jan		0.00	0.00	0.129
Volume, ac-ft		1.09	0.00	2.12
Total Vol, ac-ft		4.90	0.00	4.90

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Blue cells contain formulas



Revised 9/13/13

North Troy

Meridian Aggregates