

**BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA**

In the Matter of the Application of)	
Meridian Aggregates Company, A Limited)	
Partnership for a Permit to Use)	Application No. 2002-602
Groundwater in Johnston County, Oklahoma.)	

**PROPOSED
FINDINGS OF FACT, CONCLUSIONS OF LAW AND BOARD ORDER**

INTRODUCTION

This proceeding arose out of the application by Meridian Aggregates Company, A Limited Partnership ("Meridian" or "applicant") for a permit to use 1400 acre feet of groundwater per year from 700 acres of described land, to be taken from one (1) well in a described location, to be used for washing crushed and broken stone and dust suppression in the applicant's aggregate mining operations.

The application was protested by numerous governmental and other organizations, municipalities, individuals, and other persons who asserted varying grounds for opposing the application. The primary objection raised is that the applicant's use of groundwater will adversely affect the groundwater level in, and springs and streams emanating from, the Arbuckle-Simpson groundwater basin. Another major objection asserts that the applicant has not properly plugged numerous geotechnical borings, which could allow the groundwater to become polluted.

Following several continuances and a prehearing conference, the matter was heard on December 14-15, 2005; February 2 and 6, 2006; and March 24-30, 2006 before Jerry Barnett, a Board hearing examiner. After the hearing adjourned, additional evidence was submitted and considered. Subsequently, a Proposed Order was prepared, served on the parties, and submitted to the Board.

Upon consideration of the matter, the Board hereby makes the following Findings of Fact and Conclusions of Law and approves the application in part, subject to terms and conditions as set forth below.

FINDINGS OF FACT

Upon its evaluation of the evidence and additional records and facts officially noticed in the record, the Board hereby makes the following Findings of Fact:

BACKGROUND OF APPLICATION

1. a. On November 18, 2002 Meridian filed an application for a permit to use groundwater. Meridian subsequently made revisions to and supplemented the application. As so revised, the application requests authorization to use 1400 acre feet per year for washing crushed and broken stone and dust suppression in Meridian's aggregate mining operations. The dedicated land consists of 700 acres, including: 34 acres in the NW 1/4 of the SE 1/4, 57 acres in the W 1/2 of the NE 1/4, and 320 acres in the W 1/2, all in Section 25, T 1 S, R 4 E1M; and 289 acres in the W 1/2 of Section 36, T 1 S, R 4 E1M; all in Johnston County, Oklahoma and all as more specifically described in the record. (Legal descriptions of section numbers, township

numbers and range numbers are hereinafter abbreviated as "Section xx-yy-zz".) The application requests authorization of one (1) well (referred to hereinafter as the "production well"), to be located in the SW 1/4 of the SW 1/4 of Section 25-1-4. The application contained various other terms.

b. After the processing of the application had begun, in late May 2003 the First Regular Session of the Forty-ninth Oklahoma Legislature enacted legislation (Enrolled Senate Bill No. 288, hereinafter referred to as "SB 288") to establish new law and amend existing law governing certain groundwater applications. The instant application was within the scope of SB 288. (The applicable law and SB 288 are discussed in the Conclusions of Law below.) SB 288 was approved by the Governor on June 3, 2003 and became effective on August 28, 2003.

NOTICE OF APPLICATION; PROTESTS

2. For over two years after the original application was filed, Meridian made revisions to the application and supplied additional documentation to the Board staff to support the processing of the application. In July 2005 the Board staff deemed the application ready for notification to interested persons. The Board staff prepared a "Notice of Application" which stated the essential facts of the application, that protests against the application must be received by the Board and applicant no later than August 10, 2005, and that a hearing on the application would be held on August 12, 2005 at the Board's office in Oklahoma City. Meridian disseminated notice of the application and original hearing date by certified mail to each surface owner of land within 1320 feet of the outside boundary of the forty-acre tract with the production well location covered by the application. Meridian also published the Notice of Application on July 21 and July 28, 2005 in the *Johnston County Capital-Democrat*, a newspaper of general circulation in Johnston County, the county where the well is proposed to be located. Written protests against the application were received by the Board from over 200 persons including individuals, organizations, municipalities and governmental agencies.

HEARING

3. a. Following separate requests by protestant John Bruno and Meridian, the August 12, 2005 hearing date was postponed. The hearing location was subsequently changed to Sulphur, Oklahoma, and the hearing date was subsequently continued twice more at the request of attorneys for various parties in order to allow the attorneys additional time to try to negotiate an agreed resolution of the case. A status and prehearing conference was held on October 26, 2005 which framed the issues remaining in dispute, produced a schedule for prehearing procedures, and scheduled new dates for the hearing to commence.

b. The hearing commenced as rescheduled on December 14, 2005 in Sulphur, Oklahoma before Jerry Barnett as Hearing Examiner on behalf of the Board. The applicant appeared through and was represented by attorneys John J. Griffin, Jr. and L. Mark Walker of Crowe & Dunlevy, Oklahoma City. The protestants who appeared in person or through a representative were: the National Park Service ("NPS"), represented by attorney Peter A. Fahmy, Office of the Solicitor, Lakewood, Colorado; the U.S. Fish and Wildlife Service ("USFWS"), represented by attorney Alan R. Woodcock, Field Solicitor, U.S. Department of Interior, Tulsa; the Arbuckle Master Conservancy District ("AMCD") and the Cities of Ardmore, Davis, Durant, Sulphur, Tishomingo and Wynnewood (collectively, the "Municipal Protestants"),

represented by attorneys Charles W. Shipley of the Tulsa office and Robert D. Kellogg of the Oklahoma City office of Shipley & Kellogg, P.C.; the Estate of Ida Sutton Williams, Laurie A. Williams, Personal Representative (hereinafter referred to as "Williams"), represented by attorney Thomas J. Enis of Fellers, Snider, Blankenship, Bailey & Tippens, P.C., Oklahoma City; John Bruno and Citizens for the Protection of the Arbuckle Simpson Aquifer ("CPASA"), represented by attorney Jason B. Aamodt of Miller Keffer & Bullock, Tulsa; Earl Brewer; David Earsom; Pat Ferris and Robin McAlpin-Ferris; Gary Freeman; D.L. Hartman; G.P. Holder; Roger Kite; Eugene Kennedy; Paul Mauck; Rick Poland; Clyde Runyan; and Shannon Shirley. (Early in the hearing, the NPS and USFWS presented a written "Stipulation for Withdrawal of Protests", hereinafter referred to as the "Stipulation", executed by Meridian, the NPS, and the USFWS. The Stipulation is discussed in Finding of Fact no. 9 below. In accordance with the provisions of the Stipulation, the NPS and the USFWS withdrew their protests early in the hearing.) The hearing continued on December 15, 2005 in Sulphur; on February 2 and 6, 2006 in Oklahoma City; on March 24 and 27, 2006 in Sulphur; and on March 28-30, 2006 in Oklahoma City. Thereafter, the matter was taken under advisement. In April 2006 protestant Williams submitted additional evidence for consideration. This evidence has been duly considered. In late June 2006 a Proposed Order was prepared and served on the parties in anticipation of being presented to the Board on July 11, 2006.

OWNERSHIP; LEASE

4. The "Mining Lease" in the record shows that David M. Warren and Deborah Nell Warren (the same person as Debbi G. Warren), husband and wife; Paul O. Warren, a single man; and James R. Looney and Rebecca ("Becky") Kaye Warren Looney, husband and wife (collectively, "Lessor" or the "Warrens"), are the owners of the 700 acres of land in Sections 25-1-4 and 36-1-4 in Johnston County which Meridian has dedicated to this application. The Warrens have entered into a lease agreement with Meridian as "Lessee", evidenced by the Mining Lease. Among other things, the Mining Lease provides in pertinent part:

"3. **Lease.** (a) Subject to the terms and conditions set forth herein, *Lessor hereby demises, grants, leases and lets the Property, together with all appurtenances and water rights incident thereto, exclusively to Lessee, its successors and assigns, for the purposes of ... mining ... all grades and types of sand, gravel, rock, granite, aggregate and other stone materials ... (hereinafter collectively 'Aggregate Materials'), by any method or methods deemed desirable by Lessee Lessee agrees that it shall not sell any water from the Property commercially. Lessor also grants Lessee a temporary easement ... to construct, maintain, operate, replace and remove a pipeline for the provision of water to Lessee's plant across any property owned by Lessor in a location mutually agreed upon by the parties. Lessee shall provide to Lessor from such pipeline such water as requested by Lessor for agricultural purposes.*

"4. **Mining Rights.** *The rights demised, granted, leased and let ... with regard to the Property ... expressly include, but are not limited to, the following:*

* * *

(d) *the right to possess and use all or any part of the Property ... to explore, develop, produce, remove ... mine, treat, process, ... store, ... Aggregate Materials, waste, water or materials from all or any part of the Property"* (Bolding and underscoring in original; italics added.)

David M. Warren, Paul O. Warren and Rebecca ("Becky") Kaye Warren Looney have also executed a letter dated July 12, 2002 which Meridian referred to as its "supplemental water agreement". The latter document provides in pertinent part:

"1. Lessor [the Warrens identified in the Mining Lease] shall take any and all action necessary to provide to Lessee sufficient interests in the property that is the subject of the Lease...to obtain all necessary approvals, permits, licenses and authorizations to allow Lessee:

"(a) to drill a well or wells on the Property for the withdrawal and use of groundwater, in sufficient quantity, for Lessee's use in its operations on the Property...."

The Board finds that the owners of the surface of the 700 acres of dedicated land have granted and leased to Meridian the right to take and use groundwater from the leased land for Meridian's aggregate mining and processing operations. The Mining Lease provides an initial term of twenty (20) years after the "Effective Date" of the lease, unless sooner surrendered or otherwise terminated, and grants Meridian options to extend the term for three (3) additional terms of twenty (20) years each. The "Effective Date" of the Mining Lease is defined as the date Meridian mailed payment of the advance minimum royalty for the first year of the lease; such date is to be set forth in a separate document. The Effective Date of the Mining Lease is not identified in the record.

LAND LOCATED OVER GROUNDWATER BASIN

5. It is undisputed, and the Board finds from the record, that the dedicated land is located over multiple geologic formations collectively known as the Arbuckle Group and the Simpson Group, and which are more commonly referred to as the "Arbuckle-Simpson groundwater basin". The Board has not yet made a final determination of the maximum annual yield of this groundwater basin. The Board has begun a hydrologic study of this basin, but it is anticipated that the study will not be complete until sometime in or around 2008.

BENEFICIAL USE

6. a. Applicant Meridian Aggregates Company, A Limited Partnership is a wholly-owned subsidiary of Martin Marietta Materials, Inc. ("Martin Marietta"), the second-largest aggregate producing company in the United States. Martin Marietta acquired Meridian's stock, assets, liabilities and obligations in April 2001. Meridian has no employees of its own, but Martin Marietta supplies its employees for Meridian's operations. Martin Marietta is the managing member of the limited partnership that is Meridian. For all practical purposes relating to Application No. 2002-602, including the mining on the dedicated land and the use of water in that mining operation, Martin Marietta and Meridian are and may be considered and treated by the Board as one and the same.

b. Meridian is engaged in mining, producing and selling aggregate from a quarry, known as the "North Troy Quarry", on the dedicated land. Meridian began substantial mining operations in late 2005 and early 2006, although various preparatory measures had been implemented as early as 2000 and 2001. Aggregate is rock material that is extracted, crushed, sized and washed to make end products such as concrete rock, asphalt rock, and

base. These end products are used in building highways, bridges, and commercial-sized structures such as churches, schools and shopping malls. To produce and market the aggregate, Meridian needs water for three primary purposes: (a) washing the aggregate so that it meets certain product specifications such as those of the Texas Department of Transportation and Oklahoma Department of Transportation; (b) suppressing dust at the aggregate processing plant; and (c) suppressing dust on the North Troy Quarry haul roads and stockpile areas. Other uses associated with the primary uses will be (a') filling and maintaining the level of the 37-acre "process water pond" in which applicant will store the water needed for the aggregate washing, and (b') restoring the evaporative loss from the process water pond. Based on its experience with similar operations elsewhere, and taking into account its planned capability of 8 million metric tons of aggregate production per year, Meridian calculates that it needs a total of 1425 acre feet of water per year. This figure includes:

- (a) 576.95 acre feet consumed in aggregate washing (i.e., net loss after 12 to 13 recirculations of the process water);
- (b) 444 acre feet for initial filling and any necessary refilling of the process water pond due to ground seepage or drier-than-average years;
- (c) an average of 169.58 acre feet per year for replacement of evaporative losses from the process water pond ;
- (d) 100.66 acre feet for dust suppression at the processing plant;
- (e) 15.42 acre feet for dust suppression on the roads and stockpile areas;
- (f) a setoff or credit of an average of 118.99 acre feet per year for rainfall captured in the process water pond (this produces a subtotal of 1188 acre feet); and
- (g) an additional amount of 20% of the subtotal (or 237 acre feet), as a safety or contingency factor.

Meridian will be engaged in mining and processing operations 24 hours per day, seven days per week, so it will need a constant and reliable supply of water. Thus, Meridian will probably be able to put to beneficial use 1400 acre feet of groundwater (i.e., the amount requested by the application in this proceeding) each year. However, there are other sources of water available to Meridian which Meridian intends to use prior to using groundwater. These other sources are: (a) stream water from a diversion point on Mill Creek approximately 1 3/4 miles southwest of Meridian's proposed groundwater well location, (b) whatever stormwater that falls on and is captured in the process water pond and the mining pit, and (c) whatever groundwater that infiltrates into the mining pit. The stormwater will not be a steady source, and it is uncertain how much water will infiltrate into the pit (see discussion in Finding of Fact no. 10 below). In the meantime, Meridian has already obtained from the Board a separate permit no. 2004-033 to use 1425 acre feet of stream water per year from Mill Creek. The amount of this stream water permit would appear to be sufficient to satisfy Meridian's water demand. However, this may not necessarily be the case. For example, it is foreseeable that there may be dry periods or years when Mill Creek does not produce enough water for Meridian's needs plus the domestic uses of riparian landowners. In such circumstances, Meridian would be required by its stream water permit and applicable law to reduce or suspend its stream water diversion. Taking all of these circumstances into account, Meridian represented that it will use the groundwater from the proposed production well only as may be needed to supplement the water supplied by Mill Creek, stormwater, and pit infiltration. (The Board finds that a condition consistent with this

representation should be stated in any groundwater permit that may be issued in this case.) The Board finds that reasonable intelligence and reasonable diligence will be exercised by Meridian in the application of groundwater for a lawful purpose (aggregate processing and associated dust control) and as is economically necessary for that purpose (when needed to supplement other available sources of water). Taking Finding of Fact no. 9.f. into account, the Board finds that the use of up to 274 acre feet of groundwater for aggregate washing and processing and dust control is a beneficial use of groundwater.

ISSUE OF WASTE BY DEPLETION

7. a. Statutory factors pertaining to efficiency or lack thereof. Meridian's proposed production well will be located on the North Troy Quarry site in close proximity to the aggregate processing plant and the process water pond. Meridian represented that the groundwater pumping system will be visually inspected daily when operating. It appears that Meridian's usage of groundwater will be efficient and that undue leaks or losses of groundwater will not occur; but if any leaks or losses do occur, they will be repaired expeditiously. There was no basis to find that Meridian will take or use fresh groundwater in any manner so that the water is lost for beneficial use; transport the water from the well to the place of use in such a manner that there is an excessive loss in transit; use the water in such an inefficient manner that excessive losses occur; allow any fresh groundwater to reach a pervious stratum and be lost into cavernous or pervious materials encountered in a well; or drill wells and produce groundwater therefrom contrary to any applicable well spacing determined by the Board. Meridian will not use the water for air conditioning or cooling purposes.

b. Statutory factors pertaining to authorized use or lack thereof. On the other hand, there is evidence that Meridian plans, in effect, to take or use fresh groundwater without a permit, and to take more fresh groundwater than is authorized by the permit. As discussed in greater detail in Finding of Fact no. 10 below, Meridian proposes to pump groundwater that seeps into the mining pit out into its process water ponds and use it for aggregate washing and dust suppression. Such groundwater use would be above and beyond the groundwater use which would be permitted from the production well, which is the only well location requested for approval in this proceeding. For the reasons set forth in Finding of Fact no. 10 and Conclusion of Law no. 11, the Board finds that Meridian's proposed use of the groundwater that infiltrates into the mining pit is not authorized and should be expressly prohibited unless and until it is duly permitted. Subject to and with such a condition in any permit issued in this proceeding, the Board finds that Meridian will not take or use groundwater without a permit and will not use more groundwater than is authorized by the permit.

c. Finding. Upon consideration of the record, the Board finds that waste by depletion as specified in 82 O.S. § 1020.15 will not occur if this application is approved.

ISSUE OF WASTE BY POLLUTION

8. a. Permits from DEQ. The activities for which Meridian intends to use the groundwater are aggregate washing and dust suppression. For these activities at the North Troy Quarry, Meridian has obtained from the Oklahoma Department of Environmental Quality ("DEQ") the following authorizations or permits:

- (1) an Authorization [No. OKR100296] to Discharge storm water from Meridian's construction site (i.e., the construction, grading and stripping for the initial construction of the quarry) to Mill Creek (issued under the Oklahoma Pollution Discharge Elimination System Storm Water Construction General Permit);
- (2) an Authorization [No. OKGP01917] to Discharge storm water from its industrial facility (i.e., after the initial construction is complete) to Mill Creek (issued under the Oklahoma Pollution Discharge Elimination System Storm Water Industrial General Permit); and
- (3) an "Authorization [Permit No. WD01-003] to Discharge Under the Oklahoma Pollution Discharge Elimination System" which, despite its label, actually prohibits discharges and instead authorizes the retention of all fluids at the industrial facility via treatment and disposal of wastewater (including stormwater, dust suppression water, quarry drainage, fuel/lubrication spills, and Class III wastewater) in three total retention surface impoundments, and wastewater (including process wastewater, stormwater, dust suppression water, quarry drainage, fuel/lubrication spills, and Class III wastewater) in two flow through surface impoundments.

Meridian also has an air quality permit from DEQ which requires control of fugitive dust emissions from the haul road traffic and at the processing plant and stockpiles. The significance of the DEQ regulation of Meridian's activities is discussed in Conclusion of Law no. 9 below. (Meridian also has a permit from the Oklahoma Department of Mines ["ODOM"] for the North Troy Quarry operations.)

b. Geotechnical borings - Drilling.

i. Introduction. One of the most contentious issues in this proceeding relates to the risk of pollution to the groundwater from 58 geotechnical borings which have been drilled on Meridian's dedicated land in Section 25-1-4. The Board's rules define "geotechnical boring" as

"any excavation deeper than four feet (4'), that is drilled, augured, bored, cored, washed, driven, jetted or otherwise constructed and which is used or capable of being used to obtain soil or geological formation samples or information, or for the determination of groundwater quality or remediation." Oklahoma Administrative Code ("OAC") Section 785:35-1-2.

Meridian had the 58 geotechnical borings drilled for the exploratory purpose of determining the quality and quantity of the rock in various locations in Section 25-1-4 leased to Meridian by the Warrens.

ii. Set of 12 geotechnical borings. During 2000 and 2001, unidentified employees of Meridian drilled twelve (12) geotechnical borings in scattered locations in and near the NW 1/4 of Section 25-1-4. These are referred to in the record as "WA-01" through "WA-12". Meridian has not established that whoever drilled these 12 geotechnical borings was licensed by the Board to drill geotechnical borings. Moreover, whoever drilled these borings has not ever filed with the Board any reports of their drilling or construction. Additionally, because they were holes of no more than 8 inches in diameter and extended

across tens of acres of native grass, even with available latitude-longitude data they have not been found despite at least four searches undertaken by Martin Marietta from 2004 to 2006. The limited written information on these borings provided by Martin Marietta indicates that eight were drilled to depths of 170 or 180 feet, one was drilled to 150 feet deep, and three were drilled to depths ranging from 250 to 280 feet deep; the lithological information simply lists "overburden" to depths ranging from 4 feet to 30 feet, and "dolomite" below the overburden to the bottom of the hole. The notes of these borings do not indicate that any groundwater was encountered in the course of the drilling.

iii. Set of 39 geotechnical borings. During 2002, thirty-nine (39) more geotechnical borings were drilled by persons acting at Meridian's or Martin Marietta's direction in scattered locations in and near the NW 1/4 and the W 1/2 of the SW 1/4 of Section 25-1-4. These 39 borings include: a subset of 11 borings drilled sometime before July 23, 2002 which are referred to in the record as "WAP 01" through "WAP 11", and a subset of 28 borings drilled sometime before August 23, 2002 which includes 9 unnumbered, shallow borings in a southwest to northeast line, and 19 deeper borings numbered "WAP 10-2" and "WAP 11-2" through "WAP 28". The nine shallow borings were drilled to depths ranging from 5 feet to 17 feet to investigate the suitability of the subsurface along that line for a railroad spur. The other 19 borings were drilled to determine the quality and quantity of the rock in those locations. Meridian has not established that whoever drilled these 39 geotechnical borings was licensed by the Board to drill geotechnical borings. Moreover, whoever drilled these 39 geotechnical borings has not ever filed with the Board any reports of the drilling or construction of these borings on the Board's standard form for such information. (Meridian did submit driller's notes of these borings to the protestants during prehearing discovery, and those notes were introduced by the protestants into evidence in this proceeding.) The lithological information for the nine shallow borings typically shows the depths at which "O.B." [overburden], "brown rock", and "white rock" were encountered. There is no evidence that any water was encountered in these nine shallow borings. The information on the 19 deeper borings provided by Martin Marietta indicates that one had a depth of 25 feet; one had a depth of 50 feet; one had a depth of 165 feet, and the other 16 were drilled to 175 feet. The lithological information for the 19 deeper borings typically shows the depths at which "O.B." [overburden], "brown rock", "white rock", "mix" and "seams" were encountered. The lithological notes also show the depths wherever water was encountered, with notes such as "3-4 GPM" [gallons per minute] or "15-20 GPM" to indicate the quantity at those depths.

iv. Set of 7 geotechnical borings. During 2004, seven (7) more geotechnical borings were drilled in scattered locations in the Section 25-1-4 Mining Lease property. Three (3) of these borings were drilled by Boart Longyear in June and July 2004 and are referred to in the record as "WAC 13" through "WAC 15" (located approximately in the NW 1/4 of the SW 1/4 of Section 25-1-4). Boart Longyear is not licensed by the Board to drill geotechnical borings. Each of these three borings was drilled to a total depth of 200 feet. The other four (4) borings were drilled by WDC Exploration also in June and July 2004 and are referred to in the record as "WAC 16" and "WAC 18" through "WAC 20" (located approximately in and near the NW 1/4 of Section 25-1-4). WDC Exploration is not licensed by the Board to drill geotechnical borings. The latter four borings were drilled to depths ranging from 203 to 318 feet. Meridian or Martin Marietta caused all seven of these geotechnical borings to be drilled in order to determine the quality and quantity of the rock in those locations. Neither Boart Longyear nor

WDC Exploration has ever filed with the Board any reports of the drilling or construction of any of these borings. (Meridian did submit driller's notes of these borings to the protestants during prehearing discovery, and those notes were introduced into evidence by the protestants.) The lithological notes for these seven borings do not indicate that any groundwater was encountered in the course of drilling any of these borings.

c. Geotechnical borings - Plugging or lack thereof.

i. Plugging activity during 2004 and 2005. Sometime prior to or during late October 2004, the ODOM received a complaint alleging to the effect that gasoline or diesel may have been poured down some holes on the North Troy Quarry proposed site. On or about October 21, 2004, an ODOM inspector investigated the site with Martin Marietta's Southwest Division Environmental and Natural Resources Manager. In the course of the inspection, they discovered ten (10) open geotechnical boreholes that had not been plugged. These were WAP 09, WAP 10, WAP 18, WAP 19, WAP 20, WAP 21, WAP 25, WAP 26, WAP 27 and WAP 28. All of these 10 boreholes had been drilled in 2002 and had been open for over two years. Nine of these 10 holes had water levels ranging from 77.6 to 89.1 feet below the surface. Given their total depths ranging from 157.5 to 181 feet below the surface, these nine boreholes had standing water ranging from 71.8 feet in WAP 09 to 100 feet in WAP 28. Only WAP 20, which was only 29.7 feet deep, was a dry hole. Martin Marietta immediately had water samples taken from these borings and tested for total petroleum hydrocarbons ("TPH"), including gasoline, diesel and lube oil, as directed by ODOM and DEQ personnel. The test results for this parameter did not detect any gasoline, diesel or lube oil, which established that the groundwater had not been contaminated by any of these hydrocarbons as a result of the boreholes being left open. The only other parameters tested were pH and total dissolved solids; none of the results for these parameters indicated any pollution. Other parameters such as coliform bacteria, which could indicate contamination from animal or bird feces, were not tested. At the same time, Martin Marietta hired Newman Water Well Drilling ("Newman"), a Board-licensed water well driller, to plug all of these open boreholes. On or about October 25, 2004, Newman plugged a total of 12 boreholes identified as WAP 06, WAP 09, WAP 10, WAP 11, WAP 18, WAP 19, WAP 20, WAP 21, WAP 25, WAP 26, WAP 27 and WAP 28. The latter borings were plugged by backfilling with cement grout from the bottom of each hole to the ground surface. This plugging method exceeds the minimum plugging requirements prescribed in OAC 785:35-11-2(b). Newman filed separate reports of the plugging of each of these boreholes in early November 2004. Subsequently, Martin Marietta personnel made two more attempts of their own, using their available latitude-longitude coordinates, maps and Global Positioning System ("GPS") devices, to locate all the unplugged boreholes they could find on the leased property. Martin Marietta also hired CC Environmental, an environmental consulting firm, to do an independent third party inspection of the entire Mining Lease premises to search for and identify as many unplugged geotechnical borings as could be found. CC Environmental placed flags on the ground in the general location of the remaining 46 borings, but was able to find only five: WAP 01, WAP 03, WAP 07, WAP 08 and WAP 11-2. These five borings were plugged on December 12 and 13, 2005 by Whitetail Drilling, LLC.

ii. Plugging activity during 2006. During the prehearing phase of the instant application proceeding, on December 9, 2005 AMCD and the Municipal Protestants filed a document styled "Motion for Summary Judgment Based Upon Waste by

Pollution". Among other things, this "Motion for Summary Judgment" asserted to the effect that Meridian had left numerous boreholes open and unplugged for over 2 years, providing avenues for pollution into the Arbuckle-Simpson groundwater basin. The Motion was denied by the Hearing Examiner on December 14, 2005, but in the meantime Board staff began to treat the pollution allegations in the Motion as a complaint to be investigated. Subsequently, the Board's Executive Director asked representatives of the Board staff, DEQ, ODOM, Martin Marietta, AMCD, and the Oklahoma State University geology department to constitute what was referred to as a "Technical Committee": an ad hoc group to investigate the pollution allegations and submit recommendations to resolve the complaint. Soon after the Technical Committee began its work, its representatives determined that the railroad spur had been completed on top of the nine shallow borings identified for that purpose, and that because of their shallow depth and the coverage by the railroad line, these nine borings did not constitute a risk for groundwater pollution and needed no further investigation. Later, during the course of field work by five representatives of the Technical Committee at the North Troy Quarry site and adjacent leased property on January 19-21, 2006, six (6) geotechnical borings were found which were not plugged in compliance with the plugging methods and materials required by OAC 785:35-11-2. These six borings were WAC 16, WAC 18, WAC 19, and WAC 20, all of which had been drilled by WDC Exploration; WAC 14, which had been drilled by Boart Longyear; and WAP 16, which had been drilled by an unknown person acting at Meridian's or Martin Marietta's direction. Four borings (WAC 14, WAC 18, WAC 19 and WAC 20) had surface plugs of cement varying from 1 to 3 feet deep. Such plugs probably would have been adequate to prevent potential contaminants at the surface from entering the groundwater through the borehole. Nonetheless, such plugging did not satisfy the minimum requirements prescribed in OAC 785:35-11-2(b) (e.g., uncontaminated drill cuttings from the bottom upward to 14 feet below ground surface, a minimum of 10 feet of cement grout upward to 4 feet below ground surface, and compacted uncontaminated soil from 4 feet upward to the ground surface). Two borings (WAC 16 and WAP 16) had no surface plugs on January 19, 2006, but mining excavation that had occurred at those locations made it impossible to ascertain whether they had ever had surface plugs. Later on January 20 and 21, 2006, Martin Marietta had all these six boreholes overdrilled by its own drilling crew. The six boreholes were then plugged immediately with bentonite and cement grout in accordance with Board rules by Associated Environmental Industries, Inc. ("AEI"), a drilling company licensed by the Board to plug geotechnical borings. (AEI subsequently filed with the Board its reports of the plugging of these 6 borings.)

iii. Inadequate or unproven plugging. Meanwhile, the Technical Committee representatives determined during their January 19-21, 2006 field work that three (3) borings (WAP 04, WAP 05 and WAC 15) were located somewhere beneath the stockpiles of aggregate which had already been produced at the site, and that two (2) other borings (WA-05 and WAP 22) were located somewhere so near the north wall of the then-existing pit area that exploratory excavation for those exact locations would not be safe. Despite considerable efforts to find the remaining 21 boreholes (WA-01 through WA-04, WA-06 through WA-12, WAP 02, WAP 10-2, WAP 12 through WAP 15, WAP 17, WAP 23, WAP 24, and WAC 13) by excavating the area around each of the GPS coordinates provided by Martin Marietta, the Technical Committee representatives could not locate the actual boreholes. Consequently, it appears and the Board finds that 26 geotechnical boreholes on Meridian's dedicated land have not been properly plugged.

d. Findings on Pollution Risk from Borings.

i. Summary of plugging findings. The Board finds that none of the 58 geotechnical borings were plugged within the applicable time periods required by the Board's rule at OAC 785:35-11-2(b) (see Conclusion of Law no. 9 below). Twenty-three (23) of the 58 geotechnical borings have since been plugged in accordance with the minimum standards for methods and materials prescribed by OAC 785:35-11-2(b). However, Meridian's failures to plug the borings continued for one and one-half years with respect to WAC 14, WAC 16, WAC 18, WAC 19 and WAC 20; continued for over two years with respect to WAP 06, WAP 09, WAP 10, WAP 11, WAP 18, WAP 19, WAP 20, WAP 21, WAP 25, WAP 26, WAP 27, WAP 28; continued for over three years with respect to WAP 01, WAP 03, WAP 07, WAP 08, and WAP 11-2; continued for over three and one-half years with respect to WAP 16; have continued since 2004 and are still continuing with respect to WAC 13 and WAC 15; have continued since 2002 and are still continuing with respect to WAP 02, WAP 04, WAP 05, WAP 10-2, WAP 12, WAP 13, WAP 14, WAP 15, WAP 17, WAP 22, WAP 23, WAP 24; and have continued since 2001 and are still continuing with respect to WA-01, WA-02, WA-03, WA-04, WA-05, WA-06, WA-07, WA-08, WA-09, WA-10, WA-11 and WA-12. Meridian's failures to plug the nine unnumbered shallow borings continued for over three years; and while they were not actually plugged in compliance with the methods and materials required by OAC 785:35-11-2(b), they were nevertheless "plugged" in such a way as to prevent pollution to the groundwater: they were all less than 20 feet deep, none of them encountered groundwater, and they are now covered by a railroad bed.

ii. Findings on pollution risk and measures to address risk. Despite the inadequate plugging of 26 geotechnical borings on the site, the Board finds that under all the circumstances, the risk of groundwater pollution from these 26 borings is low. One potential source of pollution is the above-ground fuel storage tanks and oil storage tanks on the site. However, these tanks are located over 300 meters southeast from the nearest unplugged boring, and the tank area is separated from the borings by the railroad grading which increases the natural surface divide on which the railroad line is situated; the natural surface flow from the tank area is to the southeast, away from the borings' locations and away from the mining pit. Additionally, these tanks are in a shop and equipment area surrounded by a secondary containment berm which is covered by the storm water management plan approved by DEQ. It is unlikely that groundwater pollution will be caused by other sources such as hydrocarbon spills from a "catastrophic failure of equipment and vehicles (trucks, graders, earth moving equipment, cranes, etc.) that have fuel tanks and contain oil" (Technical Committee Final Report, CPASA Exhibit 8, page 6), or bacteria from cattle manure (cattle are kept off the property). Nevertheless, the Board agrees with the Technical Committee that the risk of groundwater pollution is significant enough to require Meridian to monitor and protect the groundwater as follows:

- (a) From now until February 15, 2008, Meridian shall cause groundwater samples to be taken once each month, by a person acceptable to the Board's Executive Director, from (i) the windmill well in the SE 1/4 of the SE 1/4 of the SW 1/4 of Section 25-1-4, (ii) the groundwater that infiltrates into the mining pit, and (iii) the production well in the SW 1/4 of the SW 1/4 of Section 25-1-4.

- On or after February 15, 2008, upon request by Meridian the Board's Executive Director may in his discretion reduce the frequency of sampling to once each three months;
- (b) Meridian shall cause all samples to be analyzed for TPH using method 1005 for quantitative analysis of hydrocarbons between C₆ and C₃₅ (which includes gasoline, diesel and lube oil). The samples shall be analyzed by a lab certified by DEQ and acceptable to the Board's Executive Director;
 - (c) The methodologies and protocols followed in the sampling and analysis shall be acceptable to the Board's Executive Director;
 - (d) Written records of all sampling and analysis shall be filed with the Board no later than thirty (30) days after such records are created. The records will be made available to the public as provided by the Oklahoma Open Records Act, 51 O.S. § 24A.1 and following; and
 - (e) If any sample analysis shows the presence of TPH, then Meridian shall immediately coordinate with the Board staff, develop a remediation plan acceptable to the Board's Executive Director, and implement the plan to minimize the potential of contamination moving off the Mining Lease property.
 - (f) The Board's Executive Director may modify or add to these conditions at any time as (s)he within his/her discretion deems necessary in order to monitor for, prevent and abate groundwater pollution.

The Board finds that if these conditions are made a part of any permit that is issued to Meridian, then waste of groundwater by pollution will not occur as a result of the current conditions of the geotechnical borings.

e. Production well construction. Meridian has not yet had the production well drilled. Meridian will select a well driller licensed by the Board and will require the driller to drill and complete the production well in compliance the Board's minimum construction standards for water well construction. This means, among other things, that the production well will be constructed and sealed to prevent contamination from the surface. Meridian will also have a Board employee present and providing oversight when the production well is being drilled and completed. The Board finds that waste of groundwater by pollution will not occur as a consequence of the construction of the production well. (Aside from the condition of the geotechnical borings discussed above, there was no basis otherwise to find that Meridian would allow or cause the pollution of a fresh water strata or basin through any act which will permit pollutants to intrude into such a basin or subbasin.)

f. No abandoned fresh water wells.

i. The Board finds as a matter of fact that the geotechnical borings were not and are not fresh water wells. This is true despite the facts that the geotechnical borings are a kind of "well" ("any type of excavation for the purpose of obtaining groundwater or to monitor or observe conditions under the surface of the earth but does not include oil and gas wells"; OAC 785:30-1-2), and many of them had some groundwater in them at one time or another. The geotechnical borings were not drilled for the purpose of obtaining groundwater, but were drilled for the purpose of analyzing the quantity and quality of the rock. It was

coincidental that many of them encountered groundwater. For more discussion on this issue, see Conclusion of Law no. 9 below.

ii. There is no evidence that there are any abandoned fresh water wells on Meridian's dedicated land, nor is there any evidence that Meridian has failed to properly plug any such wells or file reports thereof. Accordingly, on this point the Board finds that waste by pollution will not occur.

g. Ultimate finding on waste by pollution issue. Upon consideration of all of the foregoing, the Board finds that waste of groundwater by pollution will not occur.

SENSITIVE SOLE SOURCE BASIN; PRODUCTION WELL INTERFERENCE WITH SPRINGS OR STREAMS

9. a. Sensitive sole source groundwater basin. The Regional Administrator of the U.S. Environmental Protection Agency ("EPA") has determined that a portion of the Arbuckle-Simpson aquifer system is the sole or principal source of drinking water for an area comprising portions of Johnston, Murray and Pontotoc counties in south-central Oklahoma and that this aquifer, if contaminated, would create a significant hazard to public health. This determination was made pursuant to Section 1424(e) of the Safe Drinking Water Act. The Arbuckle-Simpson aquifer system described in the determination is substantially the same as the major groundwater basin known as the Arbuckle-Simpson groundwater basin, over which Meridian's dedicated land is located.

b. Background. One of the strongly contested fact issues in this case is whether Meridian's proposed use, from either the production well or the mining pit or both, is likely to degrade or interfere with springs or streams emanating in whole or in part from water originating from the Arbuckle-Simpson groundwater basin. There are several significant springs which emanate in whole or part from the Arbuckle-Simpson groundwater basin and which are within approximately five (5) miles of Meridian's proposed production well. These springs include but are not limited to:

- (a) two springs identified by the U.S. Geological Survey ("USGS") as "Colvert Springs", located approximately 1 mile and 1 1/2 miles, respectively, west of the proposed production well;
- (b) a spring identified by the USGS as "Clement Spring", known locally as "Holder Spring", located on protestant G.P. Holder's land, approximately 1 1/2 miles north of the production well;
- (c) "Pilot Springs", a group of interrelated springs located on protestant Williams' land, approximately 4 3/4 to 5 miles east-southeast of the production well. Pilot Springs discharges into Pennington Creek upstream from the Tishomingo National Fish Hatchery ("TNFH"), which is managed by the USFWS;
- (d) an unnamed spring located near the western edge of protestant Williams' property, approximately 1 mile northwest of the production well;
- (e) a spring identified by the USGS as "Gray Spring", and two unnamed springs, located from approximately 4 1/4 to 5 miles southeast of the production well; and
- (f) an unnamed spring located approximately 2 1/2 miles south-southeast of the production well.

There are other springs beyond 5 miles from the proposed production well location, including "Lowrance Springs" approximately 5 1/2 miles west-northwest, and "Antelope Spring" and "Buffalo Spring". The latter two springs are approximately 7 1/4 miles northwest of the production well, in the Chickasaw National Recreation Area ("CNRA"), which is managed by the NPS. Antelope and Buffalo Springs flow into Travertine Creek in the northeastern portion of the CNRA. And there are significant portions of Pennington Creek and Mill Creek, both of which are fed in part by springs emanating from the basin, which are within 5 miles of the production well location.

c. Stipulation by Meridian, NPS and USFWS. The Stipulation entered into on or about December 6, 2005 by Meridian, the NPS and the USFWS (hereinafter referred to as the "Stipulation Parties") provides that if the Board approves the application, and once the permit becomes final and no longer subject to appellate review, then Meridian will implement an agreed Monitoring and Management Plan (the "M&M Plan"). The M&M plan provides in pertinent part and substance as follows:

- (i) Meridian will not withdraw any groundwater from the production well prior to the implementation of specified portions of the M&M Plan (generally speaking, the enumerated items which follow).
- (ii) Within 60 days after the permit becomes final, the Stipulation Parties will create and convene a Technical Review Panel ("TRP") consisting of representatives of each of the Stipulation Parties and the Board to provide a forum for receiving and sharing information, making technical reviews, and making recommendations regarding monitoring and courses of action.
- (iii) During the first year of production of aggregate in commercial quantities, Meridian will limit its use of groundwater from the production well to no more than 700 acre feet. This amount will increase proportionately each year up to 1400 acre feet per year in the fifth year of such production.
- (iv) Meridian will use groundwater from the production well only when the commercially usable water from Mill Creek, the commercially usable water from the mining pit, and the commercially usable water in the process water ponds is insufficient to supply the necessary volume of water for Meridian's mining, processing and dust suppression operations.
- (v) Meridian will measure the amount of stream water diverted from Mill Creek, measure the precipitation at North Troy Quarry, meter the water pumped from the mining pit and calculate the volume of groundwater in such water, meter all groundwater withdrawn from the production well, collect water level data from the production well continuously as is feasible, and will report all such information monthly to the TRP.
- (vi) In the event the Board approves the application for 700 acre feet per year or less, then following the completion of the hydrologic study of the Arbuckle-Simpson groundwater basin, and for the duration of active mining operations plus a two year period following the completion of reclamation activities, Meridian will reimburse the Board for reasonable costs (subject to specified limits) directly attributable to the continuous monitoring of water levels in three (3) specified wells located northeast and north of Meridian's production well, the continuous

monitoring of Pennington Creek between Pilot Springs and the TNFH, and the collection and analysis of one (1) water quality sample each at the production well, six (6) specified wells, Colvert Springs and Pilot Springs.

- (vii) In the event the Board approves the application for 701 acre feet per year or more, and six (6) months after the TRP determines that Meridian's withdrawal from the production well will exceed 700 acre feet per year, then following the completion of the hydrologic study of the Arbuckle-Simpson groundwater basin, and for the duration of active mining operations plus a two year period following the completion of reclamation activities, Meridian will reimburse the Board for reasonable costs (subject to specified limits) directly attributable to the continuous monitoring of water levels in six (6) specified wells located east, northeast, north and northwest of Meridian's production well, the continuous monitoring of Pennington Creek between Pilot Springs and the TNFH, and the continuous monitoring of Mill Creek downstream of Colvert Springs.

The Stipulation Parties have requested that if the Board approves the application in whole or in part, then the Board incorporate the M&M Plan set forth in Exhibit A to the Stipulation as part of the terms and conditions of the permit.

d. Meridian's evidence: Use from the production well.

i. Introduction. Meridian contended that its proposed use from the production well will not likely degrade or interfere with springs or streams emanating from the Arbuckle-Simpson groundwater basin. Meridian produced substantial evidence to support this contention. Meridian's evidence included testimony by Martin Marietta's vice president and general manager for its North Texas-Oklahoma district, Martin Marietta's Southwest Division Environmental and Natural Resources Manager, and an expert in geology, hydrology and hydrogeology retained by Martin Marietta. Meridian also produced numerous exhibits including maps, photographs, hydrographs, published studies, government agency publications, and computer modeling results.

ii. Summary of Meridian expert evidence. Meridian's expert in geology, hydrology and hydrogeology reviewed the application, did an extensive review of the available literature on and data from the Arbuckle-Simpson groundwater basin, and visited other quarries and surface features in the area as well as the North Troy Quarry. He is recommending and Meridian is planning to have the production well drilled and completed to at least 1100 feet deep in order to gain a sufficient amount of groundwater for Meridian's needs (the actual depth will be governed by the conditions and the amount of groundwater encountered during drilling). This expert also conducted several computer model simulations of the drawdown effect that could be expected from the production well. The Meridian expert's models did not consider recharge to the groundwater. (Not taking recharge into account is typical for such modeling, which makes the model results conservative, i.e., more extreme than what might occur in reality. The Arbuckle-Simpson groundwater basin is sensitive to precipitation events; precipitation recharges the basin and is the dominant force that causes fluctuations in the levels of groundwater in the basin.) The Meridian expert used two different scenarios, including one which assumed that Meridian would withdraw at a continuous rate of 700 acre feet per year. The latter modeling results indicated that Meridian's pumping of the

production well after a period of 10 years would cause a drawdown of approximately 2 to 3 feet in the Colvert Springs and the Clement/Holder Spring approximately 1 1/2 miles from the production well. Lesser drawdowns were predicted for other springs, such as Pilot Springs, which are farther from the production well. The second model scenario assumed that Meridian would withdraw at a continuous rate of 1400 acre feet per year. The latter modeling results indicated that Meridian's pumping of the production well after a period of 10 years would cause a drawdown of approximately 3 to 5 feet in the Colvert Springs and the Clement/Holder Spring, and approximately 3 feet in Pilot Springs. Considering the conservative and simplistic nature of the modeling plus other pertinent factors, Meridian's expert testified to the effect that in his opinion the pumping of up to 1400 acre feet per year will not degrade or interfere with the springs and streams emanating from the basin.

e. Protestants' evidence.

i. Introduction. On the other hand, several protestants, particularly Williams and CPASA, produced substantial evidence to support their contentions that Meridian's proposed use from the production well will likely degrade or interfere with springs or streams emanating from the Arbuckle-Simpson groundwater basin. The protestants' evidence included testimony by an expert in hydrology and geology retained by Williams, and an expert in geology and another expert in geology, hydrogeology and the transport of groundwater retained by CPASA. The protestants also produced numerous exhibits including maps, photographs, rocks, diagrams, government agency publications, and drawdown calculations.

ii. Summary of Williams expert evidence. Protestant Williams' expert in hydrology and geology prepared a baseline survey in early 2005 of the water availability and water quality on the Williams Ranch adjacent to and in the area of Meridian's dedicated land, including performing pump tests in four wells and measuring depth to groundwater in several other wells. This witness also reviewed the Meridian groundwater application, did an extensive review of the available literature on and data from the Arbuckle-Simpson groundwater basin, visited the North Troy Quarry and other quarries and surface features including springs in the area, and made his own calculations of the drawdown effect that could be expected from the production well. The Williams expert also assumed that the production well would be drilled and completed to a depth of 1100 feet with the screen beginning at 300 feet deep. He further assumed that Meridian would withdraw at a continuous rate of 1400 acre feet per year, and likewise did not take recharge into account. The Williams expert testified to the effect that his calculations showed Meridian's pumping of the production well after a period of 10 years would cause a drawdown of approximately 4 feet at Pilot Springs (over 4 1/2 miles east of the production well), approximately 6 feet in the Colvert Springs, 6 feet in the Clement/Holder Spring, and approximately 7 feet in what he referred to as the "Williams Spring", located approximately 3/4 mile from the production well. This witness further testified that due to the locations and effects of faults to the north and south, the drawdown will be exacerbated in some locations; for example, at Pilot Springs the drawdown may be doubled from what his calculation showed. Moreover, the Williams expert testified, the effect of the pumping of the Sparks irrigation wells a few miles away will intersect with the drawdown effect caused by the Meridian production well, causing a cumulative drawdown effect in Pilot Springs. This expert witness testified that in his opinion, Meridian's proposed withdrawal will dramatically affect the flow of

Pilot Springs to the point that the springs will not flow, particularly during low water seasons, and that the other springs he referenced will likely be severely affected.

iii. Summary of CPASA expert evidence. Protestant CPASA's expert in geology, hydrogeology and movement of groundwater reviewed the Meridian groundwater application and ODOM mining application, reviewed the available literature on and data from the Arbuckle-Simpson groundwater basin, and visited the North Troy Quarry and other quarries and surface features including springs in the area. The CPASA expert testified to the effect that Meridian's proposed use from the production well will degrade or interfere with springs or streams emanating from the basin.

f. Findings. Upon consideration of this fact issue and the disparate evidence produced by the parties, the Board makes several observations. None of the evidence conclusively establishes what will or will not occur in the future. There are reasons to discount much of the evidence to one degree or another. For example, computer model simulations and hand calculations of anticipated drawdown effects are useful but cannot always be depended upon to predict what will happen in the real world (one expert gave his opinion that his model results were conservative; on the other hand, an expert on the other side gave his opinion that the reality will be worse than the model results). Many things are known about the Arbuckle-Simpson groundwater basin but much is unknown, hence the need for completion of the hydrologic study of the basin. Nevertheless, much of the evidence produced by the parties has merit and is useful to the inquiry the Board must determine in this case. On balance, the Board finds that Meridian's proposed withdrawal of groundwater from the production well at a rate of up to 1400 acre feet per year may degrade or interfere with the springs or streams emanating from the Arbuckle-Simpson groundwater basin. On the other hand, it appears that if Meridian's amount is limited to the basin's average annual recharge, then Meridian will not likely degrade or interfere with the springs or streams emanating from the Arbuckle-Simpson groundwater basin. The average annual recharge is estimated to be 4.7 inches per year, according to Circular 91 published by the Oklahoma Geological Survey entitled "Hydrology of the Arbuckle Mountains Area, South-Central Oklahoma". Multiplying 4.7 inches by 700 acres and then dividing by 12 inches per acre foot produces a result of 274 acre feet. More on the question of degradation or interference from the production well is discussed in Conclusion of Law no. 10 below.

MINING PIT INTERFERENCE WITH SPRINGS OR STREAMS

10. a. Introduction. Meridian anticipates that the excavation of the aggregate material from the North Troy Quarry will last for several decades. Meridian plans to excavate to approximately 280 feet below the ground surface, over an area of approximately 232 acres, in the northern and western portion of the Mining Lease land in Section 25-1-4. Meridian commenced excavation operations in the latter part of 2005. At the time of the hearing dates in February and March 2006, Meridian had excavated the current mining pit over a surface area of approximately 150 feet by 150 to 200 feet, which reached an approximate depth of 85 to 90 feet below ground surface at its deepest level. As of the conclusion of the hearing on March 30, 2006, no groundwater had been encountered in the mining pit. However, it is anticipated that groundwater from the Arbuckle-Simpson groundwater basin will eventually infiltrate into the mining pit as the excavation progresses. Meridian intends to pump such groundwater out of the mining pit and use it as part of its process water for aggregate washing and dust suppression.

Meridian argued that as a matter of law, any groundwater that infiltrates into the mining pit is not subject to the Board's jurisdiction and is beyond the proper scope of this proceeding. Without waiving its objection to the Board's consideration, Meridian contended further that as a matter of fact the amount of such groundwater infiltration would be relatively small and its withdrawal would not degrade or interfere with springs or streams emanating from the basin. On the other hand, the protestants argued that the law requires such groundwater use to be permitted by the Board, and in fact Meridian's groundwater withdrawal from the mining pit will be a substantial amount that will interfere with springs or streams emanating from the basin. The Board's conclusions of law on this issue are discussed in Conclusion of Law no. 11 below.

b. Summary of Meridian's evidence. Meridian produced substantial evidence of the properties of the groundwater, the quarries (including the groundwater infiltration characteristics at other quarries in the area), and the geologic formations in the area, particularly the upper portion of the Arbuckle formation in which the North Troy Quarry is mining. Some of the sources of this evidence and information included available literature and publications, government agencies, site visits, and information from the geotechnical borings. Based upon all of this evidence, Meridian's witnesses testified to the effect that the amount of groundwater that infiltrates into the mining pit will be 50 acre feet per year or less; and that if this expectation is wrong and the infiltration turns out to be much more substantial, then Meridian nonetheless can and will manage the groundwater so that it will not be pumped out and discharged off site. (Meridian has developed a contingency plan to manage the groundwater infiltration in the unexpected event that the amount thereof exceeds the amount Meridian needs and can use in its operations. The main points of the contingency plan are as follows:

- Step 1: Cease pumping groundwater from the production well, and cease pumping stream water from Mill Creek;
- Step 2: Pump the groundwater from the mining pit into the process water ponds and use it;
- Step 3: If the groundwater from the pit exceeds what can be stored in and used from the process water ponds, then the mining operation will be adjusted to extract rock laterally and stay above the static water level in the pit. This outward extraction process could last for decades;
- Step 4: If a time comes when the mining has extracted all the rock outward from above the static level of the excess groundwater in the pit, then Meridian would choose one of three options:
 - Option A: Close the North Troy Quarry;
 - Option B: Continue the quarrying operations by purchasing or leasing additional land, obtaining a permit therefor, and continuing the outward mining above the static level of the excess groundwater in the pit; or
 - Option C: Extracting the rock from beneath the static level of the groundwater in the pit, using underwater drilling and blasting methods and digging the rock with a drag line.

Based upon its evidence and contingency plan, Meridian represented that it will not pump groundwater out of the mining pit and discharge it off the site. The Board finds that a condition consistent with Meridian's representation which prohibits discharge of groundwater off the site should be incorporated as a condition of any permit that is issued in this case.) In sum, Meridian's evidence supported its assertion that its proposed use of the groundwater that infiltrates into the pit will not degrade or interfere with springs or stream emanating from the basin.

c. Summary of protestants' evidence. On the other hand, the protestants produced substantial evidence of their own regarding (1) the fracturing and permeability of, and movement of groundwater through, the rock at the North Troy Quarry and in the nearby area; (2) the water producing capability of the geotechnical borings; and (3) information about the properties of the groundwater, the quarries, and the geologic formations in the area; the latter information was developed from available literature and publications, government agencies, and site visits. The protestants' evidence supported their contentions to the effect that the amount of groundwater that infiltrates into the mining pit will be substantial and the proposed use thereof will degrade or interfere with springs or streams emanating from the basin.

d. Findings. Upon consideration and evaluation of the evidence on this issue, the Board finds that the amount of groundwater that will infiltrate into the mining pit probably will be more than 5 acre feet per year (i.e., more than an amount that can qualify as domestic use). Because Meridian has no authority to use this groundwater and will not be discharging the groundwater off the site, the Board further finds that whatever the amount turns out to be, Meridian's proposed management thereof is not likely to degrade or interfere with springs or streams emanating from the Arbuckle-Simpson groundwater basin. More on the questions pertaining to the groundwater in the mining pit is discussed in Conclusion of Law no. 11 below.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and evidence in the record, the Board draws the following Conclusions of Law:

LAW APPLICABLE TO USE OF GROUNDWATER GENERALLY

1. Under Title 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of that land. That surface owner may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, 82 O.S. § 1020.1 and following.

SUBJECT MATTER JURISDICTION

2. The Board has subject matter jurisdiction to adjudicate applications for use of groundwater according to the Oklahoma Groundwater Law.

PERSONAL JURISDICTION; DUE PROCESS

3. Due and proper notice of this proceeding was given to all potentially interested persons as required by law. Meridian, the protestants of record, and all other potentially

interested persons have been afforded due process of law and an adequate opportunity to be heard. Of these, only Meridian, NPS, USFWS, AMCD, the Municipal Protestants, John E. Bruno, CPASA, Williams, Earl Brewer, David Earsom, Pat Ferris, Robin McAlpin-Ferris, Gary Freeman, D.L. Hartman, G.P. Holder, Roger Kite, Eugene Kennedy, Paul Mauck, Rick Poland, Clyde Runyan, Shannon Shirley and C.I. Maxwell have met the procedural requirements to be recognized as parties in this proceeding. All other interested persons have defaulted and abandoned their interests for failure to appear at the hearing or otherwise failing to follow required protest procedures according to OAC Section 785:4-7-3(c).

GROUNDWATER LAW; ISSUES TO BE DETERMINED

4. When a person makes an application for a groundwater permit, 82 O.S. § 1020.9 and OAC Section 785:30-3-5 require the Board to determine several specific issues from the evidence presented by the parties, hydrologic surveys and other relevant data available. These issues are:

- (a) whether the land is owned or leased by the applicant;
- (b) whether the land overlies a fresh groundwater basin or subbasin;
- (c) whether the use to which the applicant intends to put the water is a beneficial use;
- (d) whether waste by depletion or pollution, as specified in 82 O.S. § 1020.15, will occur; and
- (e) whether the proposed use is likely to degrade or interfere with springs or streams emanating in whole or in part from water originating from a sensitive sole source groundwater basin or subbasin.

Pursuant to 82 O.S. § 1020.9(A)(2), the Board is required to approve an application by issuing a permit if the Board finds that the land owned or leased by the applicant overlies a fresh groundwater basin, the use to which the applicant intends to put the water is a beneficial use, waste specified by 82 O.S. § 1020.15 will not occur, and that the proposed use is not likely to degrade or interfere with springs or streams emanating in whole in or in part from water originating from a sensitive sole source groundwater basin.

OWNERSHIP; LEASE

5. a. Protestant CPASA contended that certain language near the end of paragraph no. 3(a) of the Mining Lease ("Lessee shall provide to Lessor from such pipeline such water as requested by Lessor for agricultural purposes") rendered the Mining Lease invalid because it requires Meridian to provide water to the lessors, the Warrens, for purposes outside what Meridian has applied for. The Board concludes that this contention mischaracterizes the Mining Lease, is without merit, and must be rejected. The "water" in the sentence cited by CPASA refers to stream water from Mill Creek which Meridian stores in a reservoir on the Warrens' land. This stream water is not part of the groundwater which Meridian is authorized to withdraw and use for its aggregate mining and processing pursuant to other terms of the Mining

Lease. This stream water and what the Mining Lease provides about it are all extraneous to the question of the validity of the lease which the Board must determine in this groundwater case.

b. The Board concludes that Meridian has a valid lease from the surface owners of the dedicated land which grants to Meridian the right to take and use groundwater from that land for washing crushed and broken stone and dust suppression in Meridian's aggregate mining operations. Because Meridian's right to use groundwater derives from its Mining Lease from the surface owners of the subject land, the Board concludes that the maximum life of any groundwater permit that may be issued in this proceeding must not exceed the term of such Mining Lease.

LAND LOCATED OVER GROUNDWATER BASIN

6. a. The Board concludes that the land dedicated by Meridian is located over the geologic formation known as the Arbuckle-Simpson groundwater basin. The Board has not yet determined the maximum annual yield ("MAY") for this basin, although the hydrologic study upon which the MAY will be based is underway and expected to be completed in approximately two years.

b. Several protestants requested that the application be denied until the hydrologic study and MAY for the Arbuckle Simpson groundwater basin are completed. But the law does not require that a study of the groundwater basin be completed prior to deciding a permit application. Instead, the law provides for applications to be approved (upon determination of the issues discussed in Conclusion of Law no. 4 above), and temporary permits to be granted, in basins where the MAY has not yet been determined. According to 82 O.S. § 1020.11(B), a "temporary" permit is to be granted for the same purposes as a "regular" permit prior to completion of a MAY of a groundwater basin.

BENEFICIAL USE

7. a. "Beneficial use" is defined in OAC Section 785:30-1-2 as:

"the use of such quantity of...groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife...." (Emphasis added.)

b. In this case, the proposed use is to wash aggregate material and suppress dust in aggregate mining operations, which will facilitate the production of aggregate for many kinds of construction. This purpose is lawful. Meridian has demonstrated that it will exercise reasonable intelligence and reasonable diligence in using the groundwater for a lawful purpose. The agreed condition that Meridian will use the groundwater from the production well only when needed to supplement the water available from Mill Creek and stormwater ensures that Meridian's use will be "economically necessary". In this case, the evidence indicates and the Board finds that use of up to 274 acre feet of groundwater to supplement water from other sources for aggregate washing and dust suppression constitutes a beneficial use of groundwater.

ISSUE OF WASTE BY DEPLETION

8. a. Introduction. Title 82 O.S. § 1020.9 provides to the effect that before the Board takes final action on a groundwater application, the Board must determine whether waste as specified by 82 O.S. § 1020.15 will occur. Section 1020.15(A) is quoted as follows:

"A. The Oklahoma Water Resources Board shall not permit any fresh groundwater user to commit waste by:

1. Drilling a well, taking, or using fresh groundwater without a permit, except for domestic use;
2. Taking more fresh groundwater than is authorized by the permit;
3. Taking or using fresh groundwater in a manner so that the water is lost for beneficial use;
4. Transporting fresh groundwater from a well to the place of use in such a manner that there is an excessive loss in transit;
5. Using fresh groundwater in such an inefficient manner that excessive losses occur;
6. Allowing any fresh groundwater to reach a pervious stratum and be lost into cavernous or otherwise pervious materials encountered in a well;
7. Permitting or causing the pollution of fresh water strata or basin through any act which will permit fresh groundwater polluted by minerals or other waste to filter or otherwise intrude into such a basin or subbasin. The Board shall be precluded from determining whether waste by pollution will occur pursuant to the provisions of this paragraph if the activity for which the applicant or water user intends to or has used the water as specified under Section 1020.9 of [title 82] is required to comply with rules and requirements of or is within the jurisdictional areas of environmental responsibility of the Department of Environmental Quality or the State Department of Agriculture[, Food and Forestry (hereinafter referred to as "ODAFF")];
8. Drilling wells and producing fresh groundwater therefrom except in accordance with the well spacing previously determined by the Board;
9. Using fresh groundwater for air conditioning or cooling purposes without providing facilities to aerate and reuse such water; or
10. Failure to properly plug abandoned fresh water wells in accordance with rules of the Board and file reports thereof."

The term "waste by depletion" (as that term is used in the case of Oklahoma Water Resources Board v. Texas County Irrigation and Water Resources Ass'n, 1984 OK 96, and in 82 O.S. § 1020.9) is defined in OAC 785:30-1-2 as:

"unauthorized use of wells or groundwater; [d]rilling a well, taking, or using fresh groundwater without a permit, except for domestic use; [t]aking more fresh groundwater than is authorized by the permit; [t]aking or using fresh groundwater in any manner so that the water is lost for beneficial use; [t]ransporting fresh groundwater from a well to the place of use in such a manner than there is an excessive loss in transit; [u]sing fresh groundwater to reach a pervious stratum and be lost into cavernous or otherwise pervious materials encountered in a well ... drilling wells and producing fresh groundwater therefrom except in accordance

with the well spacing previously determined by the Board; ... or [u]sing fresh groundwater for air conditioning or cooling purposes without providing facilities to aerate and reuse such water." (Italics in original.)

The italicized language is quoted from 82 O.S. § 1020.15(A)(1) through (6) and (8) and (9). (Paragraphs (7) and (10) of § 1020.15(A) are forms of "waste by pollution", discussed in Conclusion of Law no. 9 below.)

b. Efficiency. Applying the law to the facts, the Board concludes that waste of groundwater by depletion as specified in 82 O.S. § 1020.15(A)(3) through (6) and (8) and (9) will not occur.

c. Authorized use. Applying the law to the facts, and subject to the permit condition expressed in Finding of Fact no. 7.b., the Board concludes that waste of groundwater by depletion as specified in 82 O.S. § 1020.15(A)(1) and (2) will not occur.

ISSUE OF WASTE BY POLLUTION

9. a. Introduction. The Texas County case additionally held that in a groundwater application proceeding the Board must also determine whether waste by pollution will occur. The term "waste by pollution" refers to pertinent portions of 82 O.S. § 1020.15(A), and is defined in OAC 785:30-1-2 as:

"[p]ermitting or causing the pollution of a fresh water strata or basin through any act which will permit fresh groundwater polluted by minerals or other waste to filter or otherwise intrude into such a basin or subbasin ... or [f]ailure to properly plug abandoned fresh water wells in accordance with rules of the Board and file reports thereof." (Italics in original.)

The italicized language in this definition is quoted from 82 O.S. § 1020.15(A)(7) and (10).

b. Geotechnical borings.

i. Applicability of "preclusion" limitation on Board's determination. Section 1020.15(A)(7) prohibits permitting or causing the pollution of fresh groundwater by any act which will permit "waste" (any substance which may pollute or tend to pollute any waters of the state; see 82 O.S. § 1084.2(2)) to filter or otherwise intrude into a fresh groundwater basin or subbasin. However, sections 1020.9 and 1020.15 of title 82 provide that if *the activity for which the applicant intends to use the water* is required to comply with rules and requirements of or is within the jurisdictional areas of environmental responsibility of the DEQ or the ODAFF, then the Board shall be precluded from making a determination whether waste by pollution pursuant to § 1020.15(A)(7) will occur as a result of *such activity*. Two examples of such an activity are: (x) providing water supply to the public, which the Board has held in other cases is subject to DEQ jurisdiction and regulation, and (y) swine production in a concentrated animal feeding operation, which the Board has held is subject to ODAFF jurisdiction and regulation. In those cases, the Board has concluded that it was precluded from determining whether groundwater pollution will occur as a result of the applicants' public water supply activities (e.g., location and construction of water supply lines), and likewise the applicants' swine production

activities (e.g., waste management). But even when the limitation is applicable, it does not necessarily cover all of an applicant's activities. For example, the Board has consistently held in all cases across the spectrum that waste by pollution with respect to the limited subject of the drilling and completion of water wells is an issue which the Board should and must determine. In other words, no matter what the applicant's water use may be, the Board is not precluded from making a determination on waste by pollution with respect to the condition of an applicant's water well(s), though the Board may be precluded from making the determination with respect to some other activity of the applicant. In this case, the *aggregate washing and dust suppression* activities for which the applicant intends to use the groundwater are within the jurisdictional area of environmental responsibility of DEQ for (1) point source discharges of pollutants and storm water to waters of the state which originate from industrial and mining sources, facilities and activities; (2) air quality under the federal Clean Air Act and applicable state law; (3) water, waste, and wastewater treatment systems including waste disposal systems; and (4) groundwater protection for such activities; see 27A O.S. § 1-3-101(B)(1), (8), (12) and (17). But the Board concludes that the applicant's *geotechnical boring* activity is not "the activity for which the applicant intends to use the water" within the meaning of 82 O.S. §§ 1020.9(A)(2)(c) and 1020.15(A)(7). As a result, the Board concludes that the "preclusion" of the latter two statutory provisions is not applicable with respect to the geotechnical boring activity, and therefore the Board is required to make a determination whether waste by pollution will occur as a result of the geotechnical borings.

ii. Meridian's plugging failures. While other persons may share some of the responsibility, the Board concludes that applicant Meridian is responsible in two separate capacities for the drilling and plugging of the 58 geotechnical borings in Section 25-1-4: first, Meridian caused the borings to be drilled; and second, as the exclusive mineral lessee Meridian is the "owner" of the land where they were drilled, for purposes of OAC 785:35-11-2(e) ("[i]f a ... geotechnical boring is abandoned after the drilling equipment has been removed from the site, responsibility for proper plugging within the applicable time period specified in this section shall lie with the owner of the land where the ... boring is located.") See also OAC 785:35-7-2(a)(3): "The driller and the well owner are charged with the responsibility of taking whatever steps are reasonable in a particular situation to guard against waste and contamination of the groundwater resources and to see that unused... boring [sic] are properly plugged." The Board further concludes that Meridian failed to plug any of the 58 borings within the time period required by OAC 785:35-11-2(b) ("[g]eotechnical borings shall be plugged to prevent pollution of groundwater within thirty (30) days after completion of drilling or immediately if drilled by an unlicensed or uncertified person..."). The Board further concludes that Meridian's failures to plug the borings in accordance with the minimum standards for methods and materials prescribed by OAC 785:35-11-2-(b) continued for one and one-half years with respect to WAC 14, WAC 16, WAC 18, WAC 19 and WAC 20; continued for over two years with respect to WAP 06, WAP 09, WAP 10, WAP 11, WAP 18, WAP 19, WAP 20, WAP 21, WAP 25, WAP 26, WAP 27, WAP 28; continued for over three years with respect to WAP 01, WAP 03, WAP 07, WAP 08, and WAP 11-2; continued for over three and one-half years with respect to WAP 16; have continued since 2004 and are still continuing with respect to WAC 13 and WAC 15; have continued since 2002 and are still continuing with respect to WAP 02, WAP 04, WAP 05, WAP 10-2, WAP 12, WAP 13, WAP 14, WAP 15, WAP 17, WAP 22, WAP 23, WAP 24; and have continued since 2001 and are still continuing with respect to WA-01, WA-02, WA-03, WA-04, WA-05, WA-06, WA-07, WA-08, WA-09, WA-10, WA-11 and WA-12. The Board further

concludes that Meridian's failures to plug the nine unnumbered shallow borings continued for over three years, and while they were not actually plugged in compliance with the methods and materials required by OAC 785:35-11-2(b), they were nevertheless "plugged" in such a way as to prevent pollution to the groundwater.

iii. Conclusion. Applying these conclusions to the facts, and subject to the conditions specified in Finding of Fact no. 8.d.ii., the Board concludes that waste by pollution will not occur as a result of the conditions of the geotechnical borings.

c. Production well. The Board further concludes that waste by pollution will not occur as a result of the construction and use of Meridian's production well.

d. No abandoned fresh water wells. Paragraph 10 of 82 O.S. § 1020.15(A), which pertains to waste by pollution by "failure to properly plug abandoned fresh water wells in accordance with rules of the Board and file reports thereof", is not triggered in this case because there are no such wells on Meridian's dedicated land. The Board does not agree with the suggestion of some of the protestants that Meridian's geotechnical borings constitute "abandoned fresh water wells". Geotechnical borings and fresh water wells are types of wells, but are nevertheless different types of wells that are treated differently in many provisions of the Board's rules. For example, OAC Section 785:35-3-1(a) provides:

"(a) Who must file and types of certifications.

(1) All persons engaged in the following categories of activities in this state shall make application for and obtain a license from the Board:

(A) Category 1: commercial drilling or plugging of groundwater wells including test drilling for groundwater, and commercial drilling or plugging of fresh water observation wells;

(B) Category 2: commercial drilling or plugging of monitoring wells and site assessment wells, and drilling or plugging of geotechnical borings;

(C) Category 3: commercial installation of water well pumps;

(D) Category 4: commercial drilling or plugging of wells utilized for heat exchange purposes including but not limited to the following:

(i) heat exchange wells; and

(ii) geothermal wells.

(2) The license issued by the Board shall indicate on its face each category and specific activity or activities as described in (a)(1) of this section for which the licensee is certified to perform and conduct."

* * *

"(e) Administration and procedures relating to examination.

(1) Upon notification of the dates, times, and places of examinations, the applicant shall notify the Board of the date, time, and place the applicant will be present to take the examination relating to the activities listed in 785:35-3-1(a)(1) for which the license or operator certification is sought. There shall be four (4) kinds of examinations:

(A) an examination relating to groundwater wells and fresh water observation wells,

- (B) an examination relating to monitoring wells, site assessment observation wells, and geotechnical boring [sic],
- (C) an examination relating to pump installation activities, including but not limited to related electrical work performed from the output side of a fused disconnect or breaker box, and
- (D) an examination relating to heat exchange wells." (Bold in original; underscoring added.)

Some more examples of the disparate treatment of groundwater wells and geotechnical borings are found in OAC Sections 785:35-7-1, "Minimum standards for construction of groundwater wells, fresh water observation wells, and water well test holes", and 785:35-7-2, "Minimum standards for construction of monitoring wells and geotechnical borings" (emphasis added). In this case, there was no evidence to indicate that Meridian failed to plug any abandoned fresh water wells. Accordingly, the Board concludes that waste by pollution by failure to properly plug abandoned fresh water wells will not occur.

SENSITIVE SOLE SOURCE BASIN; PRODUCTION WELL INTERFERENCE WITH SPRINGS OR STREAMS

10. a. SB 288 generally. SB 288 established several provisions of law which must be considered in this case. Section 1 of SB 288 defined "sensitive sole source groundwater basin" as:

"a major groundwater basin or subbasin all or a portion of which has been designated as a 'Sole Source Aquifer' by the [EPA] pursuant to the Safe Drinking Water Act as of the effective date of [SB 288], including any portion of any contiguous aquifer located within five (5) miles of the known areal extent of the surface out-crop of the sensitive sole source groundwater basin" (codified at 82 O.S. 1020.9A(B)(1)).

SB 288 also stated that the provisions of SB 288 "shall be applicable to groundwater permit applications for which no final adjudication has been made by the [Board] before the effective date of" SB 288 (82 O.S. § 1020.9A(B)(3)). Section 3 of SB 288 amended 82 O.S. 1020.9 to add another issue and finding which the Board must determine before taking final action on an application for a groundwater permit: whether "the proposed use is likely to degrade or interfere with springs or streams emanating in whole or in part from water originating from a sensitive sole source groundwater basin or subbasin" (82 O.S. § 1020.9(A)(1)(d) and (A)(2)(d)). See also Conclusion of Law no. 4 above.

b. "Sensitive sole source groundwater basin". Meridian argued that the Arbuckle-Simpson groundwater basin cannot be considered a sensitive sole source groundwater basin because the EPA did not give adequate notice to landowners in the area and therefore did not properly designate the basin as a "sole source aquifer". The Board rejects this argument and concludes that the Arbuckle-Simpson groundwater basin has been designated as a "Sole Source Aquifer" by the EPA pursuant to the Safe Drinking Water Act as of the effective date of SB 288, and therefore such basin constitutes a "sensitive sole source groundwater basin" as defined in 82 O.S. 1020.9A. Meridian's argument concerning adequacy of notice of the sole source aquifer designation appears to be a collateral attack on the validity of the EPA's

action. The Board will not look behind the fact of the designation to determine whether the procedure resulting in the designation was proper. It follows that the pertinent provisions of SB 288 discussed in Conclusion of Law no. 10.a. are applicable in this case.

c. Constitutionality of SB 288. Meridian also argued that SB 288 is unconstitutional on its face and as applied to Meridian's application. The Board concludes that as an administrative agency, the Board is bound to hold SB 288 to be constitutionally valid. According to the Supreme Court of Oklahoma,

"[e]very statute is...constitutionally valid until a court of competent jurisdiction declares otherwise [citing State ex rel. York v. Turpen, 1984 OK 26]." Dow Jones & Co., Inc. v. State ex rel. Oklahoma Tax Commission, 1990 OK 6, ¶ 6.

The Court in note 9 of its Dow Jones opinion also quoted from Professor Kenneth Culp Davis' 3 Administrative Law Treatise 74, § 20.04 (1976) that

"...We do not commit to administrative agencies the power to determine constitutionality of legislation. Only the courts have authority to take action which runs counter to the expressed will of the legislative body." [Emphasis added in Supreme Court opinion.]

The Board is aware that as of the date of this Order, the constitutional validity of SB 288 has been upheld by the District Court of Oklahoma County in a separate case. The Supreme Court of Oklahoma has affirmed the District Court judgment (Jacobs Ranch, L.L.C. v. Smith, 2006 OK 34, decided May 23, 2006), but mandate has not yet issued and the Supreme Court's decision is not yet final. In the meantime, the Board concludes that it has no power or authority to take any action in this proceeding contrary to the will of the Legislature expressed in SB 288, and the Board must hold this act to be constitutionally valid.

d. Result of application of SB 288 in this case. SB 288 makes it clear that the Board cannot approve an application for a permit to take groundwater from a sensitive sole source groundwater basin unless the Board finds that the proposed use "is not likely to degrade or interfere with springs or streams emanating ... from water originating from" such a basin. In this case, such a finding cannot be made with respect to all the groundwater for which Meridian has applied (1400 acre feet). However, the Board has found that a lesser amount (274 acre feet) can be used without likely degrading or interfering with the protected springs and streams. It is also worth noting that in a case such as this where the maximum annual yield of the basin has not been determined, the Board is to issue a temporary permit for a term of one year subject to annual revalidation (82 O.S. §§ 1020.9 through 1020.11). This revalidation requirement provides an opportunity to revisit a temporary permit and its effects annually. The facts gathered during the ongoing hydrologic study of the Arbuckle-Simpson groundwater basin, together with results of the monitoring by Meridian, will provide opportunities for a temporary permit in this case to be reevaluated as to whether and under what conditions the permit may be revalidated for another one-year term (for example, as will not likely degrade or interfere with springs or streams emanating from the basin). Such permit conditions could include, for example, a reduction or increase in the amount or rate of groundwater. Approving the application in part, subject to the terms set forth in the Order below, will provide assurance that

Meridian's use is managed so that it is not likely to degrade or interfere with springs or streams emanating from the Arbuckle-Simpson groundwater basin.

USE OF GROUNDWATER FROM MINING PIT

11. a. Board jurisdiction.

i. Arguments. Meridian argued that its use of the groundwater that infiltrates into the mining pit is not subject to the Board's jurisdiction. Section 1020.2 of title 82 provides:

"It is hereby declared to be the public policy of this state, in the interest of the agricultural stability, domestic, municipal, industrial and other beneficial uses, general economy, health and welfare of the state and its citizens, to utilize the ground water resources of the state, and for that purpose to provide reasonable regulations for the allocation for reasonable use based on hydrologic surveys of fresh ground water basins or subbasins to determine a restriction on the production, based upon the acres overlying the ground water basin or subbasin. The provisions of this act shall not apply to the taking, using or disposal of salt water associated with the exploration, production or recovery of oil and gas or to the taking, using or disposal of water trapped in producing mines." (Emphasis added.)

The protestants argued that the Legislature, in enacting SB 288 later than the enactment of § 1020.2, expressed its will to increase the burden on applications for groundwater withdrawals from a sensitive sole source groundwater basin like the Arbuckle-Simpson groundwater basin. They argued further that it would be an absurd result for the Board not to exercise jurisdiction over groundwater withdrawal from a mining pit that could substantially dewater a portion of a sensitive sole source groundwater basin.

ii. Analysis and conclusions. It is beyond dispute that the North Troy Quarry mining pit is in fact a "producing mine". And Meridian intends to "take" and "use" the groundwater that infiltrates into that producing mine. But to be exempt from the applicability of the Oklahoma Groundwater Law, the water must also be "trapped" in the producing mine. The meaning of the word "trapped" in this context has not been defined by the Board or any reported appellate court decision in Oklahoma. Title 25 O.S. § 1 provides that "[w]ords used in any statute are to be understood in their ordinary sense, except when a contrary intention plainly appears, and except also that the words hereinafter explained are to be understood as thus explained." Applying the ordinary sense of the word "trapped", the Board concludes that groundwater that infiltrates, seeps, migrates or otherwise moves into the mining pit is not in fact "trapped" in that mine because the groundwater is open to the atmosphere and is accessible from the land surface. Aside from the legal and safety restrictions that permit access only to authorized persons, any person with a bucket or a pump will be able to walk or drive to the groundwater in the pit and take some or all of it. Meridian's plan to pump the groundwater out of the pit is comparable to the relative ease with which a landowner can put a pump in a stream and pump water out of it; the water is not "trapped" in either case. Accordingly, the Board further concludes that the groundwater that infiltrates into the mining pit is not "trapped" in the

mining pit within the meaning of § 1020.2. The Board further concludes that Meridian's proposed taking and use of such groundwater from the mining pit is subject to the provisions of the Oklahoma Groundwater Law.

b. Permissibility of use from mining pit. A consequence of Meridian's § 1020.2 interpretation and argument is that the application and notice thereof requested authorization for use of groundwater only from the production well. The application did not request authorization to use the groundwater from the mining pit, and notice of such proposed use of groundwater has not been given to interested persons. On the other hand, several protestants asserted that the mining pit constitutes a "well". OAC Section 785:30-1-2 defines "well" as:

"any type of excavation for the purpose of obtaining groundwater or to monitor or observe conditions under the surface of the earth but does not include oil and gas wells." (Emphasis added.)

The Board agrees with the protestants that the mining pit meets the definition of a "well". Since notice has not been given with respect to the use of groundwater from the mining pit at all, let alone as a well location, the Board concludes that it cannot approve the use of groundwater from the mining pit, and such cannot be included within any permit that may be issued, in this proceeding. Any use of groundwater from the mining pit that does not qualify as domestic use will not be authorized unless and until Meridian makes application and obtains a permit therefor in another proceeding.

OTHER ISSUES

12. a. Several protestants moved for an order to Meridian to pay the protestants' costs and attorneys fees. These motions did not cite any legal authority in support. The Board has found no authority in the Administrative Procedures Act, case law, Board rules, or elsewhere to support such a result.

b. The parties raised a number of other issues of fact and law. For example, several protestants asserted that Meridian has engaged in a pattern of unlawful activity that warrants numerous sanctions, including striking the testimony of its expert witness from the record and denying the application. To the extent an issue raised by the parties has not been specifically addressed in the Findings of Fact or Conclusions of Law herein, the Board concludes that such contentions are not material or necessary to the decision, and therefore need not be addressed by the Board.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that application no. 2002-602 in the name of Meridian Aggregates Company, A Limited Partnership for a permit to use groundwater shall be and the same is hereby approved subject to the terms that follow:

1. A temporary permit for the year 2006 shall be issued which authorizes the use of groundwater for aggregate washing and dust control of up to a maximum of 274

- acre feet, only as may be needed to supplement (a) the water supplied by Mill Creek pursuant to Stream Water Permit No. 2004-033, and (b) stormwater on the site, from one (1) well to be located in the SW 1/4 of the SW 1/4 of Section 25, T 1 S, R 4 EIM, Johnston County;
2. The permit shall reflect dedication of 700 acres of land in Sections 25 and 36 of T 1 S, R 4 EIM as described in the Mining Lease (Applicant's Exhibit 4) in the record;
 3. Exhibit A, the "Monitoring and Management Plan for Future Permitted Groundwater Development" of the "Stipulation for Withdrawal of Protests" (NPS Exhibit 1) in the record, shall be attached to the permit and incorporated by reference into the terms, provisions and conditions of the permit;
 4. The following shall also be incorporated into the terms, provisions and conditions of the permit:
 - (a) From now until February 15, 2008, Meridian shall cause groundwater samples to be taken once each month, by a person acceptable to the Board's Executive Director, from (i) the windmill well in the SE 1/4 of the SE 1/4 of the SW 1/4 of Section 25-1-4, (ii) any groundwater that infiltrates into the mining pit, and (iii) the production well in the SW 1/4 of the SW 1/4 of Section 25-1-4. On or after February 15, 2008, upon request by Meridian the Board's Executive Director may in his discretion reduce the frequency of sampling to once each three months;
 - (b) Meridian shall cause all samples to be analyzed for TPH using method 1005 for quantitative analysis of hydrocarbons between C₆ and C₃₅ (which includes gasoline, diesel and lube oil). The samples shall be analyzed by a lab certified by DEQ and acceptable to the Board's Executive Director;
 - (c) The methodologies and protocols followed in the sampling and analysis shall be acceptable to the Board's Executive Director;
 - (d) Written records of all sampling and analysis shall be filed with the Board no later than thirty (30) days after such records are created. The records will be made available to the public as provided by the Oklahoma Open Records Act, 51 O.S. § 24A.1 and following;
 - (e) If any sample analysis shows the presence of TPH, then Meridian shall immediately coordinate with the Board staff, develop a remediation plan acceptable to the Board's Executive Director, and implement the plan to minimize the potential of contamination moving off the Mining Lease property; and
 - (f) The Board's Executive Director may modify or add to these conditions (listed in Paragraph No. 4 of this Order) at any time as (s)he within his/her discretion deems necessary in order to monitor for, prevent and abate groundwater pollution;
 5. Discharge of any groundwater that infiltrates into the mining pit in Section 25, T 1 S, R 4 EIM off the mining pit site is and shall be prohibited;
 6. Notwithstanding any language in the "M&M Plan" regarding use or pumping of groundwater from the mining pit, and notwithstanding any other provision of this Order, use of groundwater from the mining pit in Section 25, T 1 S, R 4 EIM is not authorized and is prohibited unless and until it is duly permitted;

7. If and when this permit is revalidated, it shall be subject to modification. Before revalidation for another one-year term, the Board shall determine what if any further conditions are necessary to assure that the permittee's use will not likely degrade or interfere with springs or streams emanating from the Arbuckle-Simpson groundwater basin. Such modification and conditions may include but shall not be limited to a suspension of the permit, and a reduction or increase in the amount or rate of groundwater. As part of any revalidation, the Board may evaluate any pertinent data or findings resulting from the permittee's implementation of the Monitoring and Management Plan, the ongoing hydrologic study of the Arbuckle-Simpson groundwater basin, or any other appropriate source; and
8. Notwithstanding any revalidation of the temporary permit or conversion of the temporary permit to a regular permit, the authorization to withdraw groundwater shall terminate at the same time as the permittee's groundwater lease for the dedicated land terminates. If and whenever such lease is terminated, the permittee shall give written notice thereof to the Board no later than thirty (30) days after the effective date of termination of the lease.

It is so ordered in regular and open meeting of the Oklahoma Water Resources Board this 11th day of July, 2006.

OKLAHOMA WATER RESOURCES BOARD

Rudolf J. Herrmann, Chairman

ATTEST:

Bill Secrest, Secretary

(SEAL)

CERTIFICATE OF MAILING

I certify that on the _____ day of _____, 2006 I mailed a true and correct copy of the above and foregoing instrument by depositing it in the U.S. Mails, Certified Mail Return Receipt Requested to each of the parties listed in Conclusion of Law no. 3 above, at their addresses shown on the most current mailing list maintained by staff of the Oklahoma Water Resources Board for this proceeding.

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