

BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
STATE OF IDAHO

IN THE MATTER OF THE PETITION BY AM )  
IDAHO, LLC, REQUESTING AMENDMENT )  
TO THE SPACING ORDER FOR THE ) **FINAL ORDER**  
HAMILTON AND WILLOW FIELDS. )  
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On April 16, 2013, the Oil and Gas Conservation Commission (“Commission”) considered the Recommended Order issued by Hearing Officer Richard Vine on March 28, 2013 in this matter. The Commission, by majority vote, approved the Recommended Order.

IT IS HEREBY ORDERED that the Hearing Officer’s Recommended Order is adopted in full as the final decision and order of the Commission pursuant to Idaho Code § 67-5246 and IDAPA 04.11.01.740. The Recommended Order is attached and incorporated herein by reference.

This is a final order of the Commission. Any party may file a motion for reconsideration of this final order within fourteen (14) days of the service date of this order. The Commission will dispose of the petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. *See* Idaho Code § 67-5246(4).

Pursuant to Idaho Code §§ 67-5270 and 67-5272 any party aggrieved by this final order or orders previously issued in this case may appeal this final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which: (1) a hearing was held, (2) the final agency action was taken, (3) the party seeking review of the order resides, or (4) the real property or personal property that was the subject of the agency action is attached.

An appeal must be filed within twenty-eight (28) days (1) of the service date of this final order, (2) of an order denying petition for reconsideration, or (3) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. *See* Idaho Code § 67-5273. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

DATED this 24<sup>th</sup> day of April, 2013.



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THOMAS M. SCHULTZ, JR.  
Director of the Idaho Department of Lands and  
Secretary to Oil and Gas Conservation Commission

BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
STATE OF IDAHO

IN THE MATTER OF THE PETITION BY AM )  
IDAHO, LLC, REQUESTING AMENDMENT )  
TO THE SPACING ORDER FOR THE )  
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**RECOMMENDED ORDER**

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**I. INTRODUCTION AND BACKGROUND**

This Recommended Order was prepared following a contested case hearing conducted by the Hearing Officer Richard Vine. The Recommended Order is submitted to the Oil and Gas Conservation Commission (“Commission”) for a final decision.

Jurisdiction in this matter rests with the Commission pursuant to Idaho Code § 47-317. The State Board of Land Commissioners (“Land Board”) is designated as the Commission under Idaho Code § 47-317(1). The Idaho Department of Lands (“IDL”) is the administrative agency of the Land Board under Idaho Code § 58-119. This proceeding is governed by the Oil and Gas Conservation Act, Idaho Code § 47-306 *et seq.*; IDAPA 20.07.02, Rules Governing Oil and Gas Conservation in the State of Idaho; the Idaho Administrative Procedure Act, Idaho Code § 67-5201 *et seq.*; and IDAPA 04.11.01, Idaho Rules of Administrative Procedure of the Attorney General.

This case was initiated by a letter dated September 6, 2012, from Michael Christian on behalf of AM Idaho, LLC, (“AM Idaho”) to the Commission. The letter is a petition under IDAPA 04.11.01.230.<sup>1</sup> AM Idaho requests an amendment to the Spacing Order for the Hamilton and Willow Fields.

On January 14, 2013, Richard Vine was appointed as the hearing officer and directed to issue a recommended order to the Commission upon the conclusion of the hearing. On February 13, 2013, a prehearing conference was held to determine a hearing date and establish hearing procedures. On February 20, 2013, the hearing officer held a status conference to discuss review procedures applicable to recommended orders. On March 1, 2013, in response to the issues raised during the status conference, AM Idaho waived its rights under IDAPA 04.11.01.720.02.c to file written briefs taking exception to the recommended order within 21 days of the issuance of the recommended order to allow the recommended order to be considered by the Commission at its April 16, 2013 meeting.

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<sup>1</sup> In documents filed by AM Idaho in this case, the September 6, 2012 letter is referenced as an application, rather than a petition. For consistency, the September 6, 2012 letter is referenced as an application in the remainder of the Recommended Order.

The Notice of Hearing was issued on February 21, 2013. The Notice of Hearing was published in newspapers as follows: Idaho Statesman on March 2 and 9, 2013; Idaho Press Tribune on March 3 and 10, 2013, and Independent Enterprise on March 6 and 13, 2013.

On March 8, 2013, AM Idaho submitted a letter in support of its request to amend the Spacing Order. AM Idaho provided a summary of anticipated testimony, geological exhibits G-1 through G-6, and engineering exhibits E-1 through E-6. The hearing was held on March 14, 2013 at the New Plymouth Senior Center located at 126 N. Plymouth Ave., New Plymouth, Idaho. After the hearing, on March 21, 2013, AM Idaho submitted closing comments in support of its application to amend the Spacing Order.

## **II. FINDINGS OF FACT**

1. AM Idaho requests an amendment to the Spacing Order for the Hamilton and Willow fields, approved by the Commission on April 19, 2011, which modified the default spacing of one well per 640 acres to one well per 160 acres.
2. In its application, AM Idaho requests the Commission change the spacing in the Hamilton and Willow fields from one well per 160 acres to one well per 640 acres.
3. The area described by the application includes the following land: Sections 1-4, 8-17, 21-28, 31-26 Township 8 North, Range 4 West, Boise Meridian; Sections 1-24, Township 7 North, Range 4 West, Boise Meridian (“Application Lands”).
4. The lands subject to this application are shown on Exhibit G-1 and are the lands indicated by the pink outline.
5. Mr. John Peiserich, appearing on behalf of AM Idaho, provided opening remarks and summarized AM Idaho’s requested relief. *See* Exhibit D-1. Mr. Peiserich stated that the applicant would provide testimony from three professionals: (1) Richard Brown, regarding land issues; (2) Kim Parsons, regarding geology; and (3) Deborah Savimaki, regarding reservoir engineering. Mr. Peiserich reviewed the history of exploration in the Application Lands area, and described the new operator in the area, AM Idaho. AM Idaho is a wholly owned subsidiary of Alta Mesa Holdings, a Houston, Texas, based operator with substantial U.S. onshore experience. Mr. Peiserich stated that AM Idaho was bringing its expertise to bear to maximize resource recovery, protect correlative rights, and prevent waste. Likewise, he stated, the goal of the applicant’s spacing application and its presentation at the hearing was to protect correlative rights, prevent waste, and maximize resource recovery. Mr. Peiserich stated that AM Idaho was requesting three things in its application (summarized on Exhibits D-2 through D-4):
  - a. Return to the standard statewide spacing of 640 acres per unit. The Willow and Hamilton fields included in the Application Lands were originally spaced at 640 acres, which is the standard spacing statewide for natural gas wells pursuant to IDAPA 20.7.02.330.02. Mr. Peiserich stated that the applicant’s testimony would

show that reservoir data demonstrates effective drainage of 640 acres for the primary target sand at 4100 ft.

- b. An administrative mechanism to deviate from the standard spacing to accommodate high variability between the identified sands showing extreme differences in reservoir deliverability. Mr. Peiserich stated that the applicant's testimony would show that the 3750 Foot Sand shows substantially reduced permeability relative to the 4100 Foot Sand; that current information is limited, but indicates that substantial variability exists that requires an administrative mechanism for spacing to protect correlative rights and prevent waste; and that field rules should allow for variability between units as is found in other states.
  - c. Authority to omit any lands from a drilling unit that are owned by a governmental entity and for which it can be demonstrated that such governmental entity has failed or refused to make such lands available for leasing within a reasonable time in light of the proposed development. Mr. Peiserich stated that the applicant's testimony would show that the U.S. Bureau of Land Management ("BLM") administered minerals are currently unavailable for lease and are unlikely to be made available for lease in any reasonable time to allow for development; that the applicant's request was limited to interests that cannot be integrated, i.e. federal ownership; that the applicant or its predecessors have nominated all relevant BLM lands within the Application Lands; that such nominations have been in place since 2006; that numerous meetings with BLM have been conducted and there is no foreseeable time at which BLM will commence the leasing process, thus consent to lease has not even been requested from the surface administrator.
6. Mr. Richard Brown testified on behalf of AM Idaho. Mr. Brown has a B.S. in Petroleum Land Management from the University of Texas at Austin. He worked in petroleum land management at Atlantic Richfield for seven years, and has worked with Weiser-Brown Oil Company of Magnolia, Arkansas, of which he is now a principal, for twenty-five years. Snake River Oil and Gas, LLC is a wholly-owned Idaho subsidiary of Weiser-Brown Oil Company. Mr. Brown was qualified as an expert in the field of petroleum land management for the purposes of the Application. Mr. Brown testified as follows:
- a. AM Idaho has the majority ownership/leasehold interest in the Willow and Hamilton fields. Snake River Oil and Gas is a minority participant with AM Idaho.
  - b. The State of Idaho owns lands within the Willow and Hamilton fields. The State has offered leases on the majority of those lands, as well as lands outside the fields, totaling in excess of 28,000 acres. AM Idaho has acquired those leases. In April 2013, the final lease of State lands in the Application Lands area will occur consisting of approximately 50 acres.
  - c. All the federal land in the Willow and Hamilton Fields has been nominated for lease. It is Mr. Brown's understanding that BLM has not offered and has no

intention of offering these lands for lease at any reasonable time in the future. Mr. Brown has held multiple meetings with BLM representatives in attempts to address these issues. However, BLM has not even begun the lease process by requesting consent from the federal owner. BLM has taken the position that it will not offer lands for lease until it completes a new Resource Management Plan (“RMP”) for the area. There is no clear timeline for the completion of the new RMP. Without the BLM leases, it is impossible to develop some sections because federal lands cannot be integrated. In Mr. Brown’s opinion, this results in stranding of resources. In his opinion, correlative rights are negatively impacted because resources cannot be developed, i.e. other landowners in the section cannot have their minerals produced, economic waste is caused because leases that would otherwise be productive are not. As a land professional, it is Mr. Brown’s opinion that, without the requested ability to exclude federal lands from a unit, orderly development cannot proceed, and waste will occur.

d. Exhibit D-5 is a summary of Mr. Brown’s testimony.

7. Ms. Kim Parsons testified on behalf of the applicant as an expert in geology. Ms. Parsons has over 25 years of experience in the oil and gas industry, both domestically and internationally. She has a B.S. in Geology from Texas A&M University, a M.S. in Geophysics from Stanford University, and an M.B.A. from Colorado State University. Her work experience includes Exxon, Gulf Indonesia, Manager of Geosciences with Venoco, and most recently Exploration Manager of Bridge Resources with responsibility for the Payette Basin project. Ms. Parsons is experienced in all Rocky Mountain provinces, California, Gulf Coast, West Africa, Italy, Romania, North Sea, Indonesia, and has been involved with the Payette Basin project since 2008. Ms. Parsons was qualified as an expert in the field of geology for the purposes of the Application. Ms. Parsons testified as follows:

a. She has knowledge of the geological characteristics of the formations underlying the Application Lands.

b. In support of the Application, she prepared or supervised the preparation of Exhibits G-1 through G-6 submitted by AM Idaho, and reviewed the Application.

c. Exhibit G-1 depicts the Application Lands area, including the Willow and Hamilton fields.

d. The Willow-Hamilton area is structurally located in a broad low area between the basin edge to the northeast and the central basin high to the southwest. Exhibit G-2 generally depicts the subsurface geological structures in the basin.

e. The upper fluvial sand package is widespread across the area and ranges from 500 to 800 ft. thick, except where replaced/interrupted by volcanics. Available subsurface data indicates the fluvial sand appears a consistent reservoir quality. Exhibits G-3 and G-4 are north-south and east-west cross sections across wells as depicted by the red lines on Exhibit G-2. Exhibits G-3 and G-4 reflect the

thickness and continuity of the fluvial sand. Exhibit G-5 reflects the presence of the fluvial sand in tested zone at the 4100 ft. level in the ML Investments #1-10 well.

- f. The fluvial sand is overlain by 1700 ft. to 3500 ft. of lacustrine shale, providing a regional topseal.
  - g. These characteristics are applicable to both the Willow and Hamilton fields.
  - h. Ms. Parsons gained knowledge of the characteristics of the 4100 Foot Sand and the 3750 Foot Sand during her tenure as Exploration Manager of Bridge.
  - i. Exhibit G-6 is a summary of Ms. Parson's testimony. In Ms. Parsons' opinion, based on her knowledge of the consistency of the fluvial sand across the basin and her knowledge of the characteristics of the 4100 Foot Sand and the 3750 Foot Sand, the Application lands could not be efficiently developed and drained, waste prevented, and correlative rights protected, without spacing of the Application lands returned to 640 acres, with adjustments to spacing on a case-by-case basis to account for variability in the geology and reservoir characteristics, particularly in the 3750 Foot Sand, to be determined on an administrative basis.
8. Ms. Deborah Savimaki, Senior Reservoir Engineer with MHA Petroleum Consultants of Denver, Colorado testified on behalf of AM Idaho. Ms. Savimaki holds a Masters of Petroleum Engineering and a Bachelor of Chemical Engineering from Curtin University of Technology, Perth, Australia. Prior to her employment by MHA Petroleum Consultants, she worked as a reservoir engineer for Woodside Energy of Perth, Australia. See Exhibit E-1. She was qualified as an expert in the field of reservoir engineering for the purposes of the Application. Ms. Savimaki testified as follows:
- a. She has knowledge of the reservoir engineering characteristics of the 4100 Foot Sand formations underlying the Application Lands.
  - b. In support of the Application, she prepared or supervised the preparation of Exhibits E-2 through E-6 submitted by the applicant, and reviewed the Application.
  - c. Exhibit E-2 is a map showing the location of the Application Lands and well locations. From a reservoir engineering perspective, there are no known differences in the 4100 Foot Sand across the Application Lands.
  - d. The 4100 Foot Sand penetrated by the ML 1-10 well, shown in Exhibit E-3, has a net-to-gross ratio of 80% and a net pay of 9 feet. The porosity of this formation is 22% and is filled with a wet gas yielding 18 barrels of condensate per million cubic feet of gas. An extended pressure buildup test conducted in January 2013 on this well yielded an effective permeability to gas of 304 millidarcy ("md"). Rock and fluid properties were used in a single well simulation model to investigate drainage area.

- e. To account for any reduction in permeability away from the wellbore, the simulation assumed permeability to gas of 200 md. Simulated gas rates and recoveries are plotted as a function of reservoir pressure in Exhibit E-4. The simulation indicates the well will load up at 325 thousand cubic feet per day (“mcf/d”), at a reservoir pressure of 125 pounds per square inch gauge (“psig”). Gas recovery at this abandonment pressure is over 90% of the original gas in place.
  - f. Simulations based upon measured rock and fluid properties demonstrate that 640 acre well spacing will efficiently drain the 4100 Foot Sand in the Application Lands.
  - g. The proposed 640 acre well spacing in the 4100 Foot Sand will promote efficient drainage, protect correlative rights, and prevent waste.
  - h. She has knowledge of the reservoir engineering characteristics of the 3750 Foot Sand formations underlying the Application Lands.
  - i. The 3750 Foot Sand penetrated by the DJS 1-15 well. The porosity of this formation is 33%. An extended pressure buildup test conducted in January 2013 indicated an effective permeability to gas of 0.5 md. A 640 acre simulation model of this low permeability reservoir was used to assess the recovery. Exhibit E-5 shows the simulated gas rates and recovery plotted as a function of reservoir pressure. The model indicates liquid load up will occur at 120 mcf/d, at a reservoir pressure over 1200 psig, yielding a 35% recovery.
  - j. Exhibit E-6 is a summary of Ms. Savimaki’s testimony. In Ms. Savimaki’s opinion, 640 acre spacing is inappropriate for the 3750 Foot Sand and, pending further drilling and data development, smaller well spacing will allow for efficient development of resources, prevent waste, and protection of correlative rights for this sand. However, there is presently insufficient data to justify uniformly smaller spacing. While the 4100 Foot Sand provides adequate drainage at 640 acre spacing, structural complexities in that sand may require deviation from standard spacing in some instances. Smaller well spacing requirements could be handled administratively. In her opinion, the Application lands could not be efficiently developed and drained, waste prevented, and correlative rights protected, without spacing of the Application lands returned to 640 acres, with adjustments to spacing on a case-by-case basis to account for variability in the geology and reservoir characteristics, particularly in the 3750 Foot Sand, to be decided on an administrative basis.
9. Following the close of testimony by AM Idaho’s witnesses, Mr. Peiserich summarized the testimony and the AM Idaho’s requests. *See* Exhibit D-6.

10. No testimony was offered other than that provided by the AM Idaho's witnesses.

### **III. CONCLUSIONS OF LAW**

1. Pursuant to Idaho Code § 47-319(2), it is the duty of the Commission "to regulate the exploration for and production of oil and gas, prevent waste of oil and gas and to protect correlative rights, and otherwise to administer and enforce" the Oil and Gas Conservation Act.
2. The Commission has the authority to regulate the spacing or locating of wells. Idaho Code § 47-319(5)(c). The Commission is authorized to establish spacing units for each pool. Idaho Code § 47-321(a).
3. Spacing orders "shall specify the size and shape of the units, which shall be such as will, in the opinion of the commission, result in the efficient and economical development of the pool as a whole." Idaho Code § 47-231(b).
4. "The size of the spacing units shall not be smaller than the maximum area that can be efficiently and economically drained by one (1) well; provided, that if, at the time of a hearing to establish spacing units there is not sufficient evidence from which to determine the area that can be efficiently and economically drained by one (1) well, the commission may make an order establishing temporary spacing units for the orderly development of the pool pending obtaining the information required to determine what the ultimate spacing should be." Idaho Code § 47-321(b).
5. "Except where circumstances reasonably require, spacing units shall be of approximately uniform size and shape for the entire pool." Idaho Code § 47-321(c). "The commission may establish spacing units of different sizes or shapes for different parts of a pool or may grant exceptions to the size or shape of any spacing unit or units or may change the sizes or shapes of one or more existing spacing units." *Id.*
6. "An order establishing spacing units for a pool shall cover all lands determined or believed to be underlaid by such pool, and may be modified by the commission from time to time to include additional lands determined to be underlaid by such pool or to exclude lands determined not to be underlaid by such pool." Idaho Code § 47-321(e).
7. Spacing orders may be modified by the commission to change the size or shape of one or more spacing units. Idaho Code § 47-321(f).
8. "In the absence of an order by the Commission setting spacing units for a pool," every gas well "must be located on a drilling unit consisting of approximately six hundred forty (640) contiguous surface acres, which shall be one governmental section or lot(s) equivalent thereto, upon which there is not located, and of which no part is attributed to, any other well completed in or drilling to the same pool." IDAPA 20.07.02.330 and .02.
9. The Commission may authorize a well to be drilled at a location other than that prescribed in a spacing order "[i]f the commission finds that a well drilled at the

prescribed location would not be likely to produce in paying quantities, or that surface conditions would substantially add to the burden or hazard of drilling such well, or for other good cause shown.” Idaho Code § 47-321(d).

10. Exceptions to spacing orders may be authorized under the procedures in IDAPA 20.07.02.330.04. “Upon proper application therefore, the Department may approve, as an administrative matter, an exception to Subsections 330.01 and 330.02 or any order of the Commission establishing well spacing for a pool.” *Id.*
11. The Commission has authority to amend the existing Spacing Order for the Hamilton and Willow fields pursuant to Idaho Code § 47-321(f).
12. AM Idaho presented geologic and engineering data that showed that a return to the default 640 acre spacing for gas wells, with the ability to seek administrative exceptions to the default 640 acre spacing on a case-by-case basis, would result in the area being efficiently drained, would prevent waste, and would protect correlative rights, in a manner consistent with the Commission’s duty in Idaho Code § 47-319(2).
13. Given the nature of the known geology and reservoir characteristics of the Application Lands, return to 640 acre per unit spacing is appropriate. Information now available for the 4100 Foot Sand indicates it will be most efficiently drained at 640 acre spacing. *See* Idaho Code § 47-312(b). Spacing of one well per 640 acres is the default spacing size for gas wells under IDAPA 20.07.02.330.02.
14. Information now available for the 3750 Foot Sand indicates that it is more variable in nature, and will not be drained efficiently through uniform spacing at 640 acres. However, the sand is still undeveloped and smaller uniform spacing also is not appropriate. Thus, it is most appropriate to return the field to default 640 acre spacing with provision in field rules in the Spacing Order to obtain administrative approval for downspacing on a case-by-case basis in order to promote orderly and efficient development and drainage, prevent waste, and protect correlative rights. *See* Idaho Code § 47-321(d). Such downspacing may be requested in the future according to the exception procedure in IDAPA 20.07.02.330.04.
15. AM Idaho requests authority for the Commission to consider future applications to omit land owned by government entities that have not been offered for lease within a reasonable time. AM Idaho did not request omitting specific land in its application. Rather, AM Idaho offered evidence that within the Application Lands there are areas with mineral rights owned by governmental entities,<sup>2</sup> and the failure of such entities to offer lands for lease within a reasonable time in light of proposed development may negatively impact the orderly and efficient development of the field. BLM has administrative authority over areas within the Application Lands. Some of those areas have been nominated for lease since at least 2006, but due to the BLM’s ongoing work on a new RMP for the area, it has declined to offer the areas for lease. According to the testimony of Mr. Brown, it is unlikely that the areas will be offered for lease in the

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<sup>2</sup> AM Idaho did not present evidence of the location of mineral rights owned by government entities in the Hamilton and Willow fields.

reasonably foreseeable future. The Commission has the authority to modify spacing orders under Idaho Code §§ 47-321(c), (e) and (f). It is appropriate to consider such requests in the future when specific evidence may be presented to the Commission to support the requests.

#### **IV. HEARING OFFICER RECOMMENDATION**

Based upon the information provided to me as the hearing officer, I recommend that the Commission issue a Final Order **approving** AM Idaho's request to amend the Spacing Order, as follows:

1. Field spacing in the Application Lands should be returned to the default 640 acres per well for gas wells.
2. Operators may seek administrative exceptions to the 640 acre ordered spacing from the Director of IDL on a case-by-case basis within the Application Lands under the procedure in IDAPA 20.07.02.330.04, including in such application information establishing that the maximum area that can be efficiently and economically drained by one (1) well is smaller than the ordered spacing for the area covered by the application.
3. Pursuant to Idaho Code § 47-321, the Commission has authority to consider future applications, brought before the Commission, from owner(s) in a drilling unit seeking the authority to omit any lands from such drilling unit that are owned by a governmental entity and for which it can be demonstrated that such governmental entity has failed or refused to make such lands available for leasing within a reasonable time in light of the proposed development.

#### **V. PROCEDURES FOR RECOMMENDED ORDERS**

This is a Recommended Order of the hearing officer. It will not become final without action of the Commission. Any party may file a petition for reconsideration of this Recommended Order with the hearing officer issuing the order within fourteen (14) days of the service date of this order. The hearing officer issuing this Recommended Order will dispose of any petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. *See* Idaho Code § 67-5243(3).

Within twenty-one (21) days after (a) the service date of this Recommended Order, (b) the service date of a denial of a petition for reconsideration from this Recommended Order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this Recommended Order, any party may in writing support or take exceptions to any part of this Recommended Order and file briefs in support of the party's position on any issue in the proceeding.<sup>3</sup>

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<sup>3</sup> On March 1, 2013, AM Idaho waived its right to file written briefs taking exceptions to the Recommended Order within 21 days of the issuance of the Recommended Order to allow the Recommended Order to be considered by the Commission at its April 16, 2013 meeting.

Written briefs in support of or taking exceptions to the Recommended Order shall be filed with the Commission (in care of the Idaho Department of Lands). Opposing parties shall have twenty-one (21) days to respond. The Commission may schedule oral argument in the matter before issuing a final order. The Commission will issue a final order within fifty-six (56) days of receipt of the written briefs or oral argument, whichever is later, unless waived by the parties or for good cause shown. The Commission may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order.

DATED this 28<sup>th</sup> day of March, 2013.



RICHARD VINE  
Hearing Officer