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PUBLIC UTILITY COMMISSION

APPLICATION OF LCRA  
TRANSMISSION SERVICES  
CORPORATION TO AMEND A  
CERTIFICATE OF CONVENIENCE  
AND NECESSITY FOR THE ROUND  
ROCK - LEANDER 138-KV  
TRANSMISSION LINE IN  
WILLIAMSON COUNTY

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BEFORE THE STATE OFFICE

OF

ADMINISTRATIVE HEARINGS

**RESPONSE OF ATMOS ENERGY CORP., MID-TEX DIVISION  
TO LCRA TRANSMISSION SERVICES CORPORATION'S  
FIRST REQUEST FOR INFORMATION**

Atmos Energy Corp., Mid-Tex Division ("Atmos Energy" or the "Company") files this Response to the aforementioned requests for information. Pursuant to agreement among counsel, these responses are timely filed on October 21, 2016.

**I. WRITTEN RESPONSES**

Attached hereto and incorporated herein by reference are Atmos Energy's written responses to the aforementioned requests for information. Each such response is set forth on or attached to a separate page upon which the request has been restated. Such responses are also made without waiver of Atmos Energy's right to contest the admissibility of any such matters upon hearing. Atmos Energy hereby stipulates that its responses may be treated by all parties exactly as if they were filed under oath.

**II. INSPECTIONS**

In those instances where materials are to be made available for inspection by request or in lieu of a written response, the attached response will so state. For those materials that a response indicates may be inspected at the Austin voluminous room, please call at least 24 hours in advance for an appointment in order to assure that there is sufficient space and someone available to

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accommodate your inspection. To make an appointment at the Austin voluminous room located at 98 San Jacinto Blvd, Suite 1450, Austin, Texas, please call Emma Azarani at 512-879-0926.

Respectfully submitted,

By: 

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**ATTORNEYS FOR ATMOS ENERGY  
CORP., MID-TEX DIVISION**

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing document was served on all parties via the PUC Interchange on this 21<sup>st</sup> day of October, 2016 in accordance with SOAH Order No 1 issued in this docket. In addition, a copy of these responses was provided by facsimile to counsel for LCRA on this 21<sup>st</sup> day of October, 2016.

  
Evan D. Johnson

**Question No 1.1:**

Refer to the Direct Testimony of Brad Johnson at page 5.

- a. Provide GIS shapefiles identifying the location of all Atmos natural gas steel pipelines and associated appurtenances in the Project study area.
- b. Identify the size, depth, date of installation, and age of each and every Atmos natural gas steel pipeline in the Project study area.
- c. For each Atmos natural gas steel pipeline in the Project study area, describe the nature of the ROW in which the pipeline is installed (e.g., width, private easement, public utility roadway easement, Atmos fee-owned land, etc.).

**Response:**

- a. Please see files on the attached CD in folder Attachment LCRA RFI 1.1a&b.
- b. Please see the Company's response to subpart (a). The requested information can be ascertained by clicking on each of the pipeline segments identified in the kml file included in that folder. The Company has not performed the necessary analysis to determine the depth of each segment of pipeline in the Project study area. The Company has provided all available information regarding the age of its pipelines in the attached documents.
- c. Pursuant to an agreement among counsel, the Company is providing the following information to generally describe the nature of its ROW. Please see Attachment LCRA RFI 1.1c.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.2:**

Identify and fully describe all AC mitigation measures to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities that Atmos has performed on natural gas steel pipelines in Williamson County in the last ten years. Specifically identify the date and the nature of all mitigation measures performed.

**Response:**

Pursuant to an agreement among counsel, this request only requires a sufficient level of detail to indicate what measures the Company has installed in Williamson County over the last 10 years. Subject to this limitation, the Company provides the following response:

Measures taken to address AC interference include:

- Installing test stations to allow technicians to measure AC currents and voltages on the pipeline.
- Installing remote monitoring units to remotely measure a test station's current and voltage.
- Installing zinc ribbon and connecting it to the pipeline to allow the AC current to safely exit the pipe.
- Installing deep vertical grounding and connecting to the pipe to allow the AC current to safely exit the pipe.
- Installing decouplers to allow AC to flow freely between the pipe and grounding system while maintaining the cathodic protection to the pipeline.
- Installing gradient control mats to keep stations at consistent potential throughout in order to eliminate step/touch potential hazards.

Please see Highly Sensitive Attachment LCRA RFI 1.2 for installation dates of AC mitigations measures taken in Williamson County.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.3:**

What is the total amount Atmos has paid for AC mitigation measures performed on natural gas steel pipelines in Williamson County to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities in the last ten years?

**Response:**

Pursuant to an agreement among counsel, this request only seeks the total amount of costs Atmos Energy has paid. Subject to this limitation, Atmos Energy provides the following response:

Please see Highly Sensitive Attachment LCRA RFI 1.2 regarding amounts paid for AC mitigation measures performed in Williamson County over the past 10 years.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.4:**

What is the total amount Atmos has paid for AC mitigation measures performed on all natural gas steel pipelines in Texas to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities in the last ten years?

**Response:**

Pursuant to an agreement among counsel, this request only seeks the total amount Atmos has paid for AC mitigation measures performed on all natural gas steel pipelines in Texas to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities in the last ten years. Subject to this limitation, Atmos Energy provides the following response:

Please see Highly Sensitive Attachment LCRA RFI 1.2 regarding amounts paid for AC mitigation measures performed in Texas over the past 10 years.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.5:**

What amounts, if any, for AC mitigation measures to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities has Atmos included in a request for rate recovery, including interim relief? For any amounts responsive to this request, provide the docket number of the proceeding.

**Response:**

This request is subject to a pending objection.

Preparer: Legal Counsel for Atmos Energy  
Sponsor: Legal Counsel for Atmos Energy



**Question No 1.6:**

What amounts, if any, for AC mitigation measures to address the potential effect of AC interference on natural gas pipelines crossed or paralleled by electric transmission facilities has Atmos received approval to recover in its rates, including interim relief? For any amounts responsive to this request, provide the docket number of the proceeding.

**Response:**

This request is subject to a pending objection.

Preparer: Legal Counsel for Atmos Energy  
Sponsor: Legal Counsel for Atmos Energy

**Question No 1.7:**

Refer to the Direct Testimony of Brad Johnson at page 7, footnote 4. Provide any and all documents that support the use of \$55 per liner [sic] foot as an appropriate estimate in this proceeding. To the extent any responsive documents are included in the workpapers associated with Mr. Johnson's testimony, provide specific page citations to those responsive documents.

**Response:**

See the Company's response to LCRA RFI 1.28. In addition, recent AC mitigation projects in the Round Rock area have ranged in cost from approximately \$49.7 per foot to \$95.7 per foot of pipe mitigated. It is anticipated that remediation costs in the study area would be in the \$55 per foot range due to expected mitigation conditions being similar to the lower-cost mitigation areas and due to some recent mitigation that has already been completed in the study area. See the documents included on the attached CD in folder Confidential Attachment LCRA RFI 1.7. However, as made clear in Mr. Johnson's testimony, these are merely estimates. Actual costs will be determined once a final route is selected and modeling is performed to assess the actual impacts of LCRA's project.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.8:**

Does Atmos own or operate any natural gas pipelines in the Project study area made of a material other than steel? If so, identify the location, material, size, depth, and date of installation of each and every such pipeline.

**Response:**

Pursuant to an agreement among counsel, Atmos Energy provides the following response:

Atmos Energy's positions and requested relief in this proceeding are only related to the steel natural gas pipelines and the above-ground facilities identified in the testimony of its witness Mr. Brad Johnson. The only other type of pipe owned by Atmos Energy in the study area is plastic, which Mr. Johnson does not address in his testimony and which has no relationship to the Company's requested relief in this proceeding.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.9:**

Refer to the Direct Testimony of Brad Johnson at pages 10-11. Are the NACE standards cited therein considered to be legally binding? If so, identify the specific classes of persons or types of entities that are legally bound to meet these standards.

**Response:**

The NACE standards provide industry-accepted guidance on how to best address stray currents on natural gas steel pipelines, and the Company has adopted these standards in order to protect the public safety and its facilities and to comply with state and federal regulations. Because PHMSA has not yet formally adopted the NACE standards identified in Mr. Johnson's direct testimony, Atmos Energy does not consider them to be legally binding, except to the extent the Company determines these standards are necessary to protect the public safety and its facilities pursuant to applicable state and federal regulations. For instance, 49 C.F.R. Part 192 is legally binding on the Company. Specifically, section 192.473 provides that each operator whose pipeline system is subjected to stray electric currents shall have in effect a continuing program to minimize the detrimental effects of such stray currents. The Railroad Commission's rules are also legally binding on the Company. 16 Texas Administrative Code § 8.203(2)(B) supplements 49 C.F.R. § 192.457 to require that "[w]hen a condition of active external corrosion is found, positive action must be taken to mitigate and control the effects of the corrosion. Schedules must be established for application of corrosion control. Monitoring effectiveness must be adequate to mitigate and control the effects of the corrosion prior to its becoming a public hazard or endangering public safety."

Please see the response to LCRA RFI 1.18 regarding the applicability of 49 C.F.R. Part 192 to the Company's mitigation activities.

**Question No 1.10:**

Refer to the Direct Testimony of Brad Johnson at page 17-18. Is the NACE International Publication cited therein considered to be legally binding? If so, identify the specific classes of persons or types of entities that are legally bound to meet the 20 A/m<sup>2</sup> standard.

**Response:**

See the Company's response to LCRA RFI 1.9.

Preparer: Legal Counsel for Atmos Energy  
Sponsor: Legal Counsel for Atmos Energy

**Question No 1.11:**

Refer to the Direct Testimony of Brad Johnson at page 14. Are the Atmos natural gas steel pipelines located near proposed substation sites 2-4 and 2-8 located within 1,000 feet of any existing electric transmission or distribution facilities? If so, identify the electric transmission or distribution facility and the distance between the existing electric transmission or distribution facility and the Atmos pipeline.

**Response:**

Yes. The natural gas steel pipelines located near substation sites 2-4 and 2-8 are located approximately 250 feet from existing LCRA electric facilities.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.12:**

Are any Atmos natural gas steel pipelines located on any of the sixteen properties that LCRA TSC has identified as potential substation sites? If so, identify the property or properties.

**Response:**

Based on the maps provided by LCRA to the Company, it appears that Atmos Energy's natural gas steel pipelines are located in close proximity to the substation sites identified as 2-4 and 2-8.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.13:**

Refer to the Direct Testimony of Brad Johnson at page 15.

- a. When was the Atmos above-ground valve referred to at lines 11-12 installed?
- b. Is this above-ground valve currently located within 200 feet of any existing electric transmission facilities? If so, identify the electric transmission facility and the distance between the electric transmission facility and the Atmos above-ground valve.
- c. When was the Atmos above-ground valve referred to at lines 15-17 installed?
- d. Is this above-ground valve currently located within 200 feet of any existing electric transmission facilities? If so, identify the electric transmission facility and the distance between the electric transmission facility and the Atmos above-ground valve.

**Response:**

- a. The Line L40-2-1 above ground valve was installed in 2015.
- b. The Line L40-2-1 above ground valve is approximately 45 feet from existing electric transmission lines.
- c. The Line L40-2-3 above ground valve was installed in 2013.
- d. The Line L40-2-3 above ground valve is approximately 45 feet from existing electric transmission lines.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division



**Question No 1.14:**

Refer to the Direct Testimony of Brad Johnson at page 15.

- a. When was the Atmos regulator station referred to at lines 14-18 installed?
- b. Is the regulator station currently located within 200 feet of any existing electric transmission facilities? If so, identify the electric transmission facility and the distance between the electric transmission facility and the Atmos regulator station.

**Response:**

- a. The regulator station referred to on page 15 at lines 14-18 of Brad Johnson's testimony was installed in 2000.
- b. That regulator station is approximately 45 feet from existing electric transmission lines.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.15:**

Fully describe any incidence of an electric transmission line toppling and causing damage to Atmos' above-ground natural gas facilities.

**Response:**

Pursuant to an agreement among counsel, this request seeks any and all instances on the Atmos Energy system or any other gas pipeline system that Mr. Johnson is aware of that serve as a basis for his testimony. Subject to this limitation, the Company provides the following response:

Atmos is not aware of any incident of an electric transmission line toppling and causing damage to its above ground facilities that serve as a basis for his testimony.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.16:**

At what distance do you believe an electric transmission line poses a risk of electric arc or spark igniting vented gas at an Atmos above-ground natural gas facility? Provide all documents that support or relate to your answer.

**Response:**

The distance at which an electric transmission line poses a risk of electric arc or spark igniting vented gas from a natural gas facility is dependent on the rate of gas venting and wind conditions. See Pipelines and Informed Planning Alliance's "Partnering to Further Enhance Pipeline Safety in Communities Through Risk-Informed Land Use Planning," included in the Company's public workpapers. This report states that power lines should not be located within 200 feet of a blow-down stack. 49 C.F.R. 192.179(c) requires that each blow-down discharge be located so that the gas can be blown to atmosphere without hazard, and if the transmission line is adjacent to an overhead electric line, the gas must be directed away from electrical conductors.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.17:**

Are you aware of any incidence of blasting activities occurring in proximity to Atmos natural gas facilities in the Project study area? If so, describe fully.

**Response:**

Atmos is not aware of any blasting activities occurring in proximity to its facilities in the Project study area.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.18:**

Refer to the Direct Testimony of Brad Johnson at pages 16-17. Do the federal and state minimum pipeline safety regulations discussed therein apply to persons or entities other than pipeline operators? If so, identify the persons or entities subject to these regulations and describe fully the obligations imposed on non-pipeline operators.

**Response:**

The federal and state regulations that establish pipeline safety rules only apply to those who operate a pipeline. However, the Texas Health and Safety Code provides that a person may not build, repair, replace, or maintain a construction on, across, over, or under the easement or right-of-way for a pipeline facility unless (1) notice of the construction is given the operator of the pipeline facility and (2) if the operator of the pipeline facility determines that the construction will increase risk to the public or the pipeline facility, the constructor pays the reasonable, necessary, and documented cost of the additional fortifications, barriers, conduits, or other changes or improvements necessary to protect the public or pipeline facility from that risk before proceeding with the construction. Therefore, it is necessary that pipeline operators and electric transmission operators coordinate efforts to ensure the public safety and employ efficient construction and mitigation activities consistent with the pipeline operator's obligations pursuant to state and federal safety regulations.

Preparer: Legal Counsel for Atmos Energy  
Sponsor: Legal Counsel for Atmos Energy

**Question No 1.19:**

Refer to the Direct Testimony of Brad Johnson at page 18. Admit or deny that the new PHMSA proposed pipeline integrity rule is not currently in effect. If your answer is “deny,” explain fully.

**Response:**

Admit. However, it is anticipated that the proposed rule will take effect in 2017, well before construction begins on LCRA’s proposed project. Furthermore, when the rule takes effect, it will be applicable to any facilities affected by the proposed project, regardless of when the rule takes effect or the project is constructed.

Preparer: Legal Counsel for Atmos Energy  
Sponsor: Legal Counsel for Atmos Energy

**Question No 1.20:**

Refer to the Direct Testimony of Brad Johnson at page 19. Do your prior modeling studies suggest that the type or magnitude of risks associated with AC interference posed by an electric transmission line that crosses a natural gas steel pipeline are identical to or differ from the type or magnitude of risks posed by an electric transmission line that does not cross but only parallels a natural gas steel pipeline at a distance of 500 feet or less? Explain fully.

**Response:**

The magnitude of AC interference is dependent on several criteria including but not limited to separation distance between the electric transmission line and the steel pipeline, length of parallelism, electric current flow, soil resistivity, and pipe coating resistance. The magnitude of AC interference increases as separation distance decreases assuming other criteria are constant. If the separation distance between parallel electric transmission line and steel pipeline is small, the impact of the electric line crossing the steel pipeline as the lines diverge is typically less impactful than where the electric transmission line and steel pipeline diverge without crossing.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.21:**

Has Atmos ever sought financial contribution for AC mitigation measures for its existing natural gas steel pipelines relating to the routing of electric transmission lines near existing natural gas steel pipelines from an electric utility? If so, identify the electric utility and the amount of financial contribution sought.

**Response:**

See Highly Sensitive Attachment LCRA RFI 1.21 for a list of entities from which Atmos Energy has sought financial contributions for AC mitigation measures for its existing natural gas steel pipelines relating to the routing of electric transmission lines near existing natural gas steel pipelines from an electric utility. In addition, Atmos Energy is currently working to address AC mitigation issues with other electric utilities, and the Company may seek reimbursement from those entities in the future.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division



**Question No 1.22:**

Has Atmos ever received financial contribution for AC mitigation measures for its existing natural gas steel pipelines relating to the routing of electric transmission lines near existing natural gas steel pipelines from an electric utility? If so, identify the electric utility and the amount of financial contribution received.

**Response:**

See the Company's response to LCRA RFI 1.21.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.23:**

Identify any and all ways in which Atmos has previously coordinated with an electric utility to address AC interference and AC mitigation measures relating to the routing of electric transmission lines near existing natural gas steel pipelines.

**Response:**

Pursuant to an agreement among counsel, this request seeks any and all ways that Mr. Johnson is aware of where Atmos Energy has coordinated with an electric utility and that he relied on in formulating his testimony. Subject to this limitation, Atmos Energy provides the following response:

Atmos Energy coordinates with utilities in the context of a Certificate of Convenience and Necessity proceeding, whereby the Company notifies the electric utility of the location of its natural gas pipelines along the proposed routes and gives the electric utility estimates for the additional construction cost associated with constructing transmission lines in close proximity to its natural gas steel pipelines. Atmos Energy also negotiates agreements with electric utilities who will be crossing or coming in close proximity to the Company's natural gas facilities. These agreements address construction requirements, monitoring and mitigation standards, and the reimbursement of costs, amongst other terms. For the various types of mitigation that have been performed in coordination with electric utilities, see the Company's response to Highly Sensitive Attachment LCRA RFI 1.2.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.24:**

Refer to the Direct Testimony of Brad Johnson at page 20.

- a. Identify and fully describe the ways in which Atmos has been required to perform more rigorous pipeline assessments pursuant to new and amended state and federal laws and regulations related to pipeline integrity.
- b. Identify and fully describe the ways in which 16 Tex. Admin. Code § 8.101, as amended in 2001, requires Atmos to perform more rigorous pipeline assessments.
- c. Identify each and every federal and state law and regulation, in addition to 16 Tex. Admin. Code § 8.101, that requires Atmos to perform more rigorous pipeline assessments than were required prior to the last decade.

**Response:**

Pursuant to an agreement among counsel, this request only seeks information related directly to activities performed over the last 10 years related to safety threats associated with pipeline corrosion. Subject to this limitation, Atmos Energy provides the following response:

- a. While Subpart O of the Minimum Federal Safety Standards and 16 Tex. Admin. Code §8.101 were enacted over a decade ago, the requirements found therein still drive the Company's pipeline integrity work. Subpart O requires more frequent periodic assessments on pipelines in high consequence areas, including smart pigging, pressure tests and direct assessments to the line. 16 Tex. Admin. Code §8.101 imposes similar assessment requirements on pipelines that are located both inside and outside of high consequence areas.
- b. See the response to subpart (a).
- c. See 49 C.F.R. Part 192 and 16 Texas Administrative Code 8.1-.315. Atmos Energy also relies on various advisory bulletins, rule interpretations and recommended practices to guide its activities.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.25:**

Are there any documents that Mr. Johnson reviewed, prepared, or was provided in anticipation of his testimony in this docket that have not been made available in his workpapers? If so, provide those documents.

**Response:**

Pursuant to an agreement among counsel, this request does not seek direct testimony and email to and from counsel specifically sent and received for the purpose of legal advice. In addition to all documents provided in response to LCRA RFIs 1.1, 1.2, 1.7, 1.21, and 1.28, see the documents contained on the attached CD in the folder Attachment LCRA RFI 1.25.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.26:**

Are there any documents that form the basis of Mr. Johnson's mental impressions and opinions in connection with this docket that have not been made available in his workpapers? If so, provide those documents.

**Response:**

Pursuant to an agreement among counsel, this request is limited to document that Mr. Johnson specifically relied upon to form the basis of his testimony. See the Company's response to LCRA RFI 1.25. The Company is not aware of any other documents that form the basis of Mr. Johnson's mental impressions and opinions in connection with this docket.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.27:**

Identify any and all consulting experts whose mental impressions or opinions Mr. Johnson has reviewed. For each consulting expert identified, provide the following:

- a. the expert's name, address, and telephone number;
- b. the facts known by the expert that relate to or form the basis of the expert's mental impressions and opinions formed or made in connection with this docket;
- c. the expert's mental impressions and opinions formed or made in connection with this docket, and any methods used to derive them;
- d. any bias of the expert;
- e. all documents, tangible things, reports, models, or data compilations that have been provided to, reviewed by, or prepared by or for the expert in anticipation of the expert's consultation relating to this docket; and
- f. the expert's current resume and bibliography.

**Response:**

Mr. Johnson has not reviewed the mental impressions or opinions of any consulting expert.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.28:**

To the extent not made available in the workpapers to Brad Johnson's direct testimony, provide Exhibit BJ-3 as an Excel file with all formulae intact. Provide a detailed narrative explanation of the method Mr. Johnson used to develop his totals for each column in Exhibit BJ-3.

**Response:**

See Attachment LCRA RFI 1.28 (Exhibit BJ-3).xlsx. See also the Company's response to RFI 1.7. The estimated mitigation footage included in Exhibit BJ-3 was determined using a kmz file containing each LCRA route and the Atmos Energy steel natural gas pipeline centerlines, which were provided in response to LCRA RFI 1.25. The length of pipe that is parallel within 500 feet of the LCRA route was determined by reviewing the locations of the electric transmission line routes and Atmos Energy's steel natural gas pipeline locations. Crossings were identified and 500 feet of pipe on each side of the crossing was used in the estimated mitigation footage. This is the same method used in the mitigation length for Round Rock Sections 1, 4B, and 6 in RFI 1.7.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

**Question No 1.29:**

Identify all judicial, administrative, regulatory, or legislative proceedings, other than the PUC dockets listed on page 2 of his direct testimony, in which Mr. Johnson has participated as a testifying or consulting expert.

**Response:**

Mr. Johnson has not participated as a testifying or consulting expert in any other administrative, regulatory or legislative proceedings.

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division



**Question No 1.30:**

Provide all documents in your possession, custody, or control that contradict, challenge, or call into doubt Atmos' prior modeling studies showing that AC voltage can be induced onto a steel pipeline where an electric transmission line and a natural gas pipeline intersect or parallel within 500 feet of each other.

**Response:**

Atmos Energy is not aware of any documents in its possession, custody, or control that challenge or call into doubt any of its modeling studies showing that AC voltage "can be induced onto a steel pipeline where an electric transmission line and a natural gas pipeline intersect or parallel within 500 feet of each other."

Preparer: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division

Sponsor: Brad Johnson

Title: Manager of Engineering Services,  
Atmos Energy Corp., Mid-Tex Division