

April 22, 2019

Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Attention: Ms. Kimberly D. Bose, Secretary

Re: Young Gas Storage Company, Ltd.;
Docket No. CP19-115-000
Response to Data Request – OEP/DPC/CB-1

Dear Ms. Bose:

On April 17, 2019, Young Gas Storage Company, Ltd. (“Young”) received a data request (“Data Request”) from the Office of Energy Projects Regulation (“OEP”) for information pertaining to Young’s Section 7(c) request to increase the total certificated gas storage inventory at its existing storage field. Accordingly, Young is herein filing with the Federal Energy Regulatory Commission (“Commission”) its responses to the Data Request.

Description of Proceeding

On March 26, 2019, Young submitted its application, pursuant to Section 7(c) of the Natural Gas Act requesting a certificate of public convenience and necessity for authorization to increase the total certificated gas storage inventory at its existing storage field located in Morgan County, Colorado, by an additional 1 Bcf from the existing 9.95 Bcf up to 10.95 Bcf. Young seeks to inject 800 MMcf of additional base gas inventory into its storage field in order to enhance the deliverability characteristics of the storage field.

Description of Information Being Filed

Young is herein submitting its formal responses to the Data Request.

Filing Information

Young is e-Filing this letter and responses with the Commission's Secretary in accordance with the Commission's Order No. 703, *Filing Via the Internet*, guidelines issued on November 15, 2007 in Docket No. RM07-16-000.

Pursuant to 18 C.F.R. § 388.113, Young is requesting CEII treatment of the attachment titled "Question 2 Attachment" included as part of this response. Accordingly, Young has labeled this attachment "CONTAINS CUI//CEII – DO NOT RELEASE". Young requests that the Commission accord CEII treatment to this information for the life of the assets so as not to place the assets and personnel of Young at undue risk.

If you have any questions regarding the data being filed herewith as CEII, please contact Mr. Francisco Tarin at 719-667-7517 or via email at Francisco_Tarin@kindermorgan.com.

Respectfully submitted,

YOUNG STORAGE GAS COMPANY, LTD.

By _____ /s/
Francisco Tarin
Director, Regulatory

Enclosures

Cc: Mr. Asif Balbale

YOUNG GAS STORAGE COMPANY, LTD.
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1. What is the current average interstitial water saturation for the storage reservoir?

Response:

Young's storage field is a depleted reservoir in which gas is injected, stored and withdrawn annually. As such, no interstitial water saturation measurements have been performed at Young's storage field. Young assumes a 17% water saturation used in calculating the Hydrocarbon Pore Volume during each of the bi-annual shut-ins for inventory verification.

Response prepared by or under the supervision of:

Anders Johnson
Vice President, Storage
713-420-6958

YOUNG GAS STORAGE COMPANY, LTD.
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2. Provide volumetric calculations (in hard copy and in an Excel spreadsheet) demonstrating that the reservoir can accommodate an additional 800 MMcf of base gas and 200 MMcf of working gas at the existing water saturation. Provide all variable input and assumptions.

Response:

In its application filed on March 26, 2019, Young provided as Attachment 6 of Exhibit Z-II in Volume II, a graph illustrating bottom hole pressures (“BHP”) vs. booked inventory. Based on the reservoir gas per pound ratio of 4 MMcf/psi, 1 Bcf of gas can be added and remain below the certificated maximum stabilized reservoir pressure.

The 2018 fall shut-in pressure was determined to be 1,737 psi. Applying the reservoir gas per pound for 1 Bcf, $1 \text{ Bcf} / (4 \text{ MMcf/psi}) = 250 \text{ psi}$, this pressure increase would result in an average pressure of 1,987 psia. The calculated pressure is below the certificated maximum reservoir pressure of 2,215 psia.

As part of this response, Young is providing a copy of the graph filed as Exhibit Z-II in its application. This attachment is being provided as non-public Critical Energy Infrastructure Information.

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3. Young states on page 4 of its application that the December 28, 2018 Stipulation and Agreement provided that it would seek authorization of to inject 800 MMcf of additional base gas subject to the condition that the field performs as expected and that the injection of the additional base gas does not result in gas pressures exceeding any Commission-imposed limits or in any unexpected risk of uncontrolled gas migration. Provide additional details regarding:
 1. what parameters will be assessed to determine if the “field performs as expected”;
 2. what measures will Young take if maximum certificated wellhead or reservoir pressures are exceeded due the additional volumes injected; and
 3. how any gas migration will be assessed and measures Young will take if it is determined that gas has migrated due to the additional volumes injected.

Response:

- 3(1). Young monitors the pressures on all of its wells on a daily basis, including tracking and analyzing the key observation well pressure. Young measures flow into and out of the field on a daily basis and reviews the pressure volume relationship, injections and withdrawals, and inventory for reasonableness.
- 3(2). Young controls injections into its storage field with reciprocating gas compressors. The reciprocating compressors are controlled and monitored 24 hours a day. The discharge gas pressure is monitored with a pressure transducer and controlled such that the operating pressure will not increase above the maximum certificated wellhead pressure. Furthermore, Young uses safety devices such as shutdown switches and/or relief valves that act as a secondary safety system to prevent pressures from exceeding the maximum certificated wellhead pressure (which is lower than the reservoir pressure). If for some unusual circumstance, maximum pressures were exceeded, Young would immediately work to reduce the pressure and make the necessary notifications as required by PHMSA and its operating procedures.
- 3(3). Young cycles its storage field annually both pressurizing and depressurizing the field to minimize the potential of gas migration. Additionally, Young proactively plots hysteresis curves and compares the pressure and inventory relationship. Any anomalies or deviations that are identified are investigated. Pressure volume management of the field and well monitoring ensures that potential migration issues would be recognized and mitigated.


Response prepared by or under the supervision of:

Anders Johnson
Vice President, Storage
713-420-6958

April 22, 2019


STATE OF COLORADO)
)
COUNTY OF EL PASO)

FRANCISCO TARIN, being first duly sworn, on oath, says that he is the Director of the Regulatory Department of Young Gas Storage Company, Ltd.; that he has read the Response filed on April 22, 2019, to the Office of Energy Projects' Data Request dated April 17, 2019 in Docket No. CP19-115-000, and that he is familiar with the contents thereof; that, as such Director, he has executed the same for and on behalf of said Company with full power and authority to do so; and that the matters and facts set forth therein are true to the best of his information, knowledge and belief.



Francisco Tarin
Director

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this 22nd day of April, 2019.



Stacie S. Gonzalez
Notary Public, State of Colorado
My Commission Expires: February 21, 2022

