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FACILITIES PROTECTION UNIT DIRECTOR

Georgia Public Service Commission

(404) 463-6526
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244 Washington Street, SW
Atlanta, GA 30334-5701

FAX: (404) 463-6532
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DOCKET# 45195
DOCUMENT# 204925

Docket No. 45195

AGL - Operations and Engineering
Ten Peachtree Place, NE Suite 1000
Location 1365
Atlanta, GA 30309

REF: Construction Inspection # JB23-011

☐ Certified Mail ☒ Regular Mail ☐ Email

Attention: Mr. Pedro Cherry

On April 17, 2023, a representative of the Georgia Public Service Commission Pipeline/Facilities Safety Office conducted an inspection of your gas system. The enclosed inspection report numbered JB23-011 is provided for your information and file.

In conjunction with this inspection report, Staff has recommended the following enforcement(s):

Enforcement Action:

- ☒ Notice of Probable Violation
- ☐ Notice of Probable Violation with Proposed Civil Penalty
- ☐ Notice of Amendment

Enforcement Letter:

- ☐ Warning Letter
- ☐ Letter of Concern

Enforcement Notification:

- ☐ Observed Issue
- ☐ No Violation

Please review and respond to this report in accordance with the attached Instructions for Responding to Enforcement Actions, Enforcement Letters, and Notifications Issued by the Georgia Public Service Commission. Please refer to Docket No. 45195 in your response.

Please let me know if there are any questions concerning this report at (404) 985-4271 or mthebert@psc.ga.gov. Thank you for your continuing contribution toward increased pipeline safety.

Sincerely,

Michelle Thebert

Michelle L. Thebert
Director, Office of Pipeline Safety/Facilities Protection

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REPORT OF NATURAL GAS SAFETY

INSPECTION NO: JB23-011

OPERATOR: AGL - LNG Cherokee

INVESTIGATOR: Jeff Baggett

INSPECTION DATE: April 17, 2023 REPORT MAILED DATE: June 27, 2023

Any questions concerning this report may be directed to the above address or by telephoning (404) 463-6526.

1. PURPOSE OF INSPECTION

To perform a review of the plans and procedures for the expansion of the Cherokee Liquified Natural Gas (LNG) plant.

2. CONTINUING VIOLATIONS

3. CLEARED VIOLATIONS

4. NEW VIOLATIONS

Violation	Description	Inspection#	Date
193.2067	Wind forces.	JB23-011	4/17/2023

5. OTHER RECOMMENDATIONS/COMMENTS

SEE ATTACHED INSPECTION REPORT

On April 17, May 1, and May 15, 2023, Staff conducted a series of on-line meetings to discuss materials relevant to the construction inspection of the Atlanta Gas Light Company (AGLC) Cherokee Liquefied Natural Gas (LNG) plant expansion.

During these on-line meetings the Operator was represented by:
James Hotinger – Director, Regulatory Compliance
Rick Slagle, Director - Compliance & Quality Assurance
Ralph McCollum – Lead Compliance Engineer
Ted Holm – Principal Engineer

Commission Staff was represented by:
Michelle Thebert – Director, Facilities Protection Unit
Jeff Baggett – Supervisor, Facilities Protection Unit / Lead Inspector
Alan Towe – Pipeline Safety Inspector
Joe Jones – Pipeline Safety Inspector
Jack Hewitt – Pipeline Safety Inspector
Daphne Jones – Pipeline Safety Inspector

PHMSA Staff was represented by:
Thach Nguyen – General Engineer
Katherine Roth – General Engineer
Jametta Black – General Engineer
Bob Bachman – Structural Engineering Consultant

NOTICE OF PROBABLE VIOLATION

As a result of this inspection Staff found that AGLC was in probable violation of the minimum federal safety standards; specifically:

§193.2067 Wind forces.
(b) The wind forces at the location of the specific facility must be based on one of the following:
(2) For all other LNG facilities:
(ii) The most critical combination of wind velocity and duration, with respect to the effect on the structure, having a probability of exceedance in a 50-year period of 0.5 percent or less, if adequate wind data are available and the probabilistic methodology is reliable.

STAFFS COMMENTS: On October 28, 2021, in response to a request from AGLC, Staff requested assistance from PHMSA to perform a review of materials related to AGLC's Cherokee Liquefied Natural Gas (LNG) plant expansion. On April 17, May 1, and May 15, 2023, Staff conducted a series of on-line meetings to discuss materials relevant to this construction inspection. At each of these meetings concerns were expressed to AGLC regarding its calculated wind speed.

We have reviewed the site-specific design wind speed study provided in the HDR Technical Memorandum "Cherokee LNG Site Specific Wind Study," dated July 28, 2021 (HDR Study), that was developed to satisfy 49 CFR § 193.2067(b)(2)(ii). The site-specific design wind speed is based on an evaluation of wind speeds measured at one site "Dobbins Air Reserve Base" located 27 miles from the Cherokee LNG facility. It is understood that for the Cherokee LNG project, the resulting 3-second design wind speed is to be used in conjunction with the other detailed wind design provisions of ASCE/SEI 7-05 (*see* §§ 193.2013 and193.2067(b)(1)) in order to determine the wind design forces for LNG facility structures and buildings.

Section 193.2067(b)(2)(ii) requires that site specific wind speeds used for the design of LNG facilities to be determined based on a 0.5 percent probability of exceedance in a 50-year period, which equates to a 10,000-year mean recurrence interval (MRI). In consultation with PHMSA, we are not opposed to a 10,000-year MRI wind speed that is at least equal to the wind speed calculated using wind data provided by ASCE/SEI 7-05.

Furthermore, guidance in the ASCE/SEI 7-05 commentary section clarifies that sampling errors for a single site with limited data can lead to large uncertainties in the specification of wind speed. Sampling errors are the errors associated with the limited size of the climatological data samples (e.g. years of record of extreme winds or number of storms). ASCE/SEI 7-05 commentary recommends that a site-specific strength design wind speed be based on the best estimate of wind speed plus a minimum of two to three times the standard deviation of the sampling error equating to 95% to 99% confidence intervals, respectively. Procedures for determining wind sampling error and its standard deviations are provided in the text "Wind Effects on Structures", by Simiu, E and R.H. Scanlon 1996, 3rd edition, New York, Wiley.[1]

The wind speed determined in the HDR Study is lower than the 10,000-year MRI wind speed determined using wind data from ASCE/SEI 7-05. It does not appear that the HDR Study, based on the single Dobbins Air Reserve Base site wind speed measurements, includes the effects of sampling error. Therefore, we do not believe that the wind speed determined in the HDR Study complies with § 193.2067(b)(2)(ii).

Below is a link which provides the background document on how the ASCE/SEI 7-05 wind maps were developed and the wind measurement stations used: https://www.nist.gov/publications/maps-non-hurricane-non-tornadic-wind-speeds-specified-mean-recurrence-intervals?pub_id=915120.

The Georgia Public Service Commission has consulted with PHMSA regarding this allegation that AGLC has failed to demonstrate that their calculated wind speed complies with the requirements of §193.2067(b)(2)(ii), and PHMSA concurs.

PROBABLE VIOLATION: Atlanta Gas Light Company has failed to demonstrate that their calculated wind speed complies with the requirements of § 193.2067(b)(2)(ii).

Please review and respond to this report in accordance with the attached Instructions for Responding to Enforcement Letters Issued by the Georgia Public Service Commission.

[1] "Wind Effects on Structures" is referenced in the commentary section of ASCE 7. In ASCE 7-05, it's referenced in Chapter C6. In ASCE 7-10 and ASCE 7-16, it's referenced in Chapter C26.

BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION
STATE OF GEORGIA

IN THE MATTER OF:	)	
	)	
Probable Violation Report	)	**DOCKET NO. 45195**
Atlanta Gas Light Company-LNG Cherokee	)	
Inspection JB23-011 on April 17, 2023	)	
	)	

CERTIFICATE OF SERVICE

I, the undersigned, do hereby certify that I have caused to be served a copy of the foregoing, and a copy of same was served upon all parties and persons listed below via electronic mail as indicated by an asterisk I further certify that the *Atlanta Gas Light Company* was served a hard copy of the above-stated document by U.S. Mail, certified/return receipt requested.

*Sallie Tanner, Executive Secretary
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334

* Pedro Cherry, President and CEO
Southern Company Gas
Ten Peachtree Place, NE,
Atlanta, GA 30309
ppcherry@southernco.com

*Michelle Thebert, Facilities Protection Unit Director
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334

Respectfully Submitted this 27th day of June 2023:

Cathy Nesbitt, Administrative Assistant
Georgia Public Service Commission
Facilities Protection Unit
244 Washington Street, SW
Atlanta, GA 30334