

156 FERC ¶ 61,161
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Cheryl A. LaFleur, Tony Clark,
and Colette D. Honorable.

Stephen Kohlhasse

v.

Iroquois Gas Transmission, L.P. and
Algonquin Gas Transmission, LLC

Docket Nos. CP02-31-004
CP07-457-002
CP06-76-006

ORDER DISMISSING COMPLAINT

(Issued September 7, 2016)

1. On February 12, 2016, Stephen Kohlhasse filed a complaint (Complaint) under section 385.206 of the Commission's Rules of Practice and Procedure.¹ Mr. Kohlhasse claims the Brookfield Compressor Station in Brookfield, Connecticut, owned and operated by Iroquois Gas Transmission System, L.P. (Iroquois), and connected pipelines owned and operated by Algonquin Gas Transmission, LLC (Algonquin), are producing excessive noise and vibration. Mr. Kohlhasse requests tests be conducted to isolate the cause of, and identify measures to mitigate, the alleged noise and vibration. We will dismiss the Complaint in view of our determination, as discussed below, that Iroquois and Algonquin are currently in compliance with all regulatory requirements regarding noise and vibration applicable to the Brookfield Compressor Station.

I. Notice of Complaint and Responsive Pleadings

2. Notice of the Complaint was published in the *Federal Register* on March 7, 2016.² Iroquois and Algonquin separately filed timely answers, in accordance with Rule 385.213(a)(1) of the Commission's Rules of Practice and Procedure.³ Mr. Kohlhasse submitted a response to the answers, and Iroquois and Algonquin in turn filed separate

¹ 18 C.F.R. § 385.206 (2016).

² 81 FR 11,786 (Mar. 7, 2016).

³ 18 C.F.R. § 385.213(a)(1) (2016).

replies to Mr. Kohlhasé's response, to which Mr. Kohlhasé submitted a further response. Rule 385.213(a)(2) prohibits answers to answers.⁴ However, we may waive this provision,⁵ and do so here, because we find the responsive pleadings will assist in understanding the issues raised.

II. Background

3. Iroquois' Brookfield Compressor Station went into service with a single compressor unit in 2007⁶ and was expanded by installing a second unit in 2009.⁷ There were no objections to the station's operation with a single unit; however, after the second unit was added, Mr. Kohlhasé and other nearby residents expressed concerns about noise and vibration. The Kohlhasé residence is less than one-quarter mile from the compressor station and less than 150 feet from two Algonquin pipelines. Mr. Kohlhasé alleges that since the second compressor unit was added, he has suffered adverse effects from low-frequency noise and vibration that he attributes to the Brookfield Compressor Station and associated pipeline infrastructure.⁸

4. After placing the second unit into service, under certain operating conditions the noise generated by the station's operation exceeded the limit specified in Iroquois' certificate of an average day-night sound level (L_{dn}) of 55 decibels (dBA). Iroquois made modifications to its facilities that brought the noise level below this limit. Despite the

⁴ 18 C.F.R § 385.213(a)(2) (2016).

⁵ *Id.*

⁶ Iroquois was authorized in 2002 in Docket No. CP02-31-000 to construct the Brookfield Compressor Station with a single 10,000 horsepower (hp) compressor unit. *Iroquois Gas Transmission System, L.P.*, 101 FERC ¶ 61,131 (2002).

⁷ Iroquois was authorized in 2008 in Docket No. CP07-457-000 to add a second 10,300 hp compressor unit at the Brookfield Compressor Station. *Iroquois Gas Transmission System, L.P.*, 122 FERC ¶ 61,242 (2008). Algonquin's pipeline facilities that interconnect with Iroquois's Brookfield Compressor Station were authorized in 2006 in Docket No. CP06-76-000 in *Millennium Pipeline Company, L.L.C.*, 117 FERC ¶ 61,319 (2006).

⁸ Iroquois disputes Mr. Kohlhasé's assertion that there is a correlation between the times that Mr. Kohlhasé perceives noise or vibration which he finds objectionable and the times that the compressor units are in operation. We do not find it necessary to resolve this dispute to consider the merits of the Complaint.

facilities' compliance with the noise limit, Mr. Kohlhasse and others have continued to express concerns about low-frequency noise or vibration, variously described as a hum, flutter, rumbling, droning, or truck idling.

5. In January 2010, in response to concerns Mr. Kohlhasse directed to the local electric utility, Northeast Utilities (now Eversource Energy) conducted tests to determine if its nearby electrical substation or power line could be causing the low-frequency noise or vibration described by Mr. Kohlhasse. The utility detected "a faint, low frequency, rumbling type sound" at the residence, but determined that because "the spectral shapes of an electric transformer and the noise within the house are completely different ... it is very unlikely that the sound heard and measured inside the Kohlhasse residence is generated by Northeast Utilities' nearby electrical equipment."⁹ The utility also found it unlikely that the noise at the residence could be attributed to Iroquois or Algonquin facilities.¹⁰ The report concluded by suggesting diesel locomotives idling at one or more of several surrounding industrial sites could be the source of the sound.

6. In July 2010, in response to concerns expressed by Mr. Kohlhasse that a "hum" or vibration from a pipeline could indicate a safety hazard, the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) inspected the Brookfield Compressor Station and portions of Algonquin's pipelines

⁹ TRC consultants' January 11, 2010 Report Summarizing Noise Testing Conducted at the Kohlhasse Residence, at 5, included in Iroquois' March 14, 2016 Answer in Attachment H (*see* page 189 of the March 14, 2016 Answer). This report was initially submitted to the Commission by Mr. Kohlhasse on March 2, 2010, in Docket Nos. CP02-31-000 and CP07-457-000, as an attachment to a letter to the Attorney General of Connecticut; it was submitted again by Iroquois on July 26, 2012, in Docket No. CP07-457-000, in Attachment H to its Report on Noise Mitigation Efforts at Brookfield Compressor.

¹⁰ Specifically, the utility's report states:

The nearby gas compressor station ... is powered by combustion turbines, which, unlike reciprocating engines, do not generate significant vibration. Further, Mr. Kohlhasse has indicated that the noise is always present, and that the gas compressor station has not operated full time. The presence of the adjacent underground gas pipeline was the only other identified potential source. However, ground borne vibration would not generate audible sound outdoors in the environment, and our measurements revealed the same spectral shape to the outdoor sound as was found within the home. Ground borne vibration was therefore ruled out as a potential source. *Id.*

closest to Mr. Kohlhasse's residence. In an emailed report to Mr. Kohlhasse, PHMSA's inspector stated that she did not detect noise or vibration emanating from the ground or pipelines and "would consider the sound emanating from the turbine engine compressor unit as typical (a turbine engine sound with gas flowing through the pipeline)."¹¹ In October 2010, Iroquois and Algonquin excavated portions of their pipelines to assess their structural integrity and test for vibration. The companies concluded their facilities were safe, and that there was no pipeline vibration other than instrumentation background noise.¹²

7. In 2011, Iroquois consulted with Solar Turbines, the manufacturer of its compressor units, and made modifications to the exhaust duct of its second unit. This did not eliminate perceived vibration in close proximity to the Brookfield Compressor Station site. Responding to an objection to vibration voiced by a resident directly across the street from the Brookfield Compressor Station, Commission staff inspected the site on November 17, 2011. Although staff could sense vibration at the residence across the street from the station, none of the measurements conducted by staff at the station and nearby residences (including the Kohlhasse residence) during its inspection found noise in excess of an L_{dn} of 55 dBA. The resident that objected to vibration subsequently sold the house, and Iroquois states that neither the new owner, nor the resident of an adjacent

¹¹ Iroquois' March 14, 2016 Answer, Attachment K, email dated November 2, 2010, from PHMSA to Mr. Kohlhasse reporting results from the July 16, 2010 on-site inspection (*see* page 397 of the March 14, 2016 Answer). Iroquois initially submitted PHMSA's email on July 26, 2012, in Docket No. CP07-457-00 as Attachment K to its Report on Noise Mitigation Efforts at Brookfield Compressor.

¹² *Id.* at 11 and Attachment L titled "December 3, 2010 Iroquois Submission of Kiefner and Associates, Inc. Vibration Testing Data Analysis Regarding Brookfield Compressor Station." Iroquois initially submitted the vibration analysis on July 26, 2012, in Docket No. CP07-457-000, as Attachment L to its Report on Noise Mitigation Efforts at Brookfield Compressor. On December 10, 2010, the Director of the Office of Energy Projects sent Mr. Kohlhasse a letter noting the respondents had recently submitted vibration studies and were to conduct additional studies on low-frequency noise (Iroquois submitted low-frequency noise test results on January 6, 2011 in Docket No. CP07-457-000). The Director stated that while surveys to date verified compliance with Commission regulations, staff would analyze the recently submitted and pending studies to determine next steps. Staff found no cause to take further action, as its assessment of the vibration and low-frequency noise data concluded the respondents' facilities were operating in accord with the regulatory requirements.

property (also directly across the street from the station), has expressed concerns regarding noise or vibration.¹³

III. Issues Presented in the Complaint

8. The Complaint observes that section 380.12(k)(4)(v)(A) of the Commission's regulations requires applicants seeking to install compressor facilities to demonstrate that proposed facilities will not result in noise exceeding an L_{dn} of 55 dBA at any pre-existing noise-sensitive area. The Complaint asserts that noise surveys conducted after the 2009 installation of the second compressor unit were "inconclusive and Iroquois has refused to conduct additional study or mitigation."¹⁴

9. The Complaint contends Iroquois has failed to conform to the criterion in section 380.12(k)(4)(v)(B), which states that for compressor station facilities, applicants must show the proposed facilities "shall not result in a perceptible increase in vibration at any noise-sensitive area."

10. The Complaint requests that the Commission require additional acoustical and vibration testing at the Brookfield Compressor Station and related pipeline infrastructure to isolate the cause of the alleged low-frequency noise and vibration and to identify potential mitigation measures.

IV. Answers to Complaint

11. Iroquois and Algonquin recite efforts previously undertaken to identify, measure, and mitigate noise attributable to the operation of the Brookfield Compressor Station and attached pipelines.¹⁵ The respondents stress their prior, continuous, and current compliance with all noise-related certificate conditions.

¹³ Iroquois' March 14, 2016 Answer at 13.

¹⁴ Complaint at 8.

¹⁵ For example, Iroquois states that after adding a second compressor unit, it engaged Goodfriend & Associates to conduct a new noise survey in January 2009. *See* Iroquois's February 13, 2009 filing in Docket CP02-31-000; the attached Acoustical Survey for the Brookfield Compressor Station, at 15, finds that "[t]he measured data and appropriate calculations show that the sound levels produced by the operation of the Brookfield Compressor Station, following the gas turbine and compressor installation, are below the limits of the FERC and Town of Brookfield noise regulations." Additional noise surveys conducted by Goodfriend & Associates in October 2010 and by ATCO

(continued ...)

12. Iroquois and Algonquin argue the Complaint should be dismissed for being a collateral attack on the certificate orders authorizing Iroquois' compressor station and Algonquin's interconnecting pipeline facilities, because the issue of vibration was not raised in those proceedings. The respondents insist the Complaint is procedurally deficient for not alleging a violation of an applicable statute or regulation, noting that sections 380.12(k)(4)(v)(A) and (B) of the regulations are not operating requirements, but instead describe information to be included in Resource Report 9 on Air and Noise.

13. Algonquin maintains the Complaint fails to meet the requirements of section 385.206(b)(4) of the regulations, which directs a complainant to quantify the financial impact or burden, and section 385.206(b)(10), which directs a complainant to include a form of notice of the complaint. Algonquin adds that Mr. Kohlhasse's submission was not e-Filed as a complaint, but was instead e-Filed as supplemental information.

14. Algonquin believes the concerns set forth in the Complaint are most appropriately directed to Iroquois only, since Iroquois is the exclusive owner and operator of the Brookfield Compressor Station, and the Complaint is focused on sections 380.12(k)(4)(v)(A) and (B), which are limited to noise and vibration of compressors, not pipelines. Algonquin argues that although its pipelines connect to the Iroquois station, because its pipelines are not compressor facilities, it should not be included as a respondent.

15. Mr. Kohlhasse faults the companies' noise studies for not being conducted under "a range of normal operations," i.e., when both compressor units at the station were operating, and for not including acoustical testing to assess vibration.¹⁶ Iroquois responds that it conducted multiple noise studies, both before and after installation of the second unit, during periods when both units were operating and when they were not, and that its studies demonstrate that its compressor facilities do not produce noise in excess of 55 dBA L_{dn} .

Noise Management in June 2010 also did not measure any noise levels in excess of 55 dBA L_{dn} ; *see* Iroquois' March 14, 2016 Answer's Attachment F, "IGTS '08/'09 Project – Post Installation FERC Survey," dated October 26, 2010, at 1 (page 134 of the March 14, 2016 Answer) and Attachment E, "Brookfield Compressor Station Noise Impact Assessment," dated June 29, 2010, at 4.4 Noise Abatement Option Calculated Sound Levels (page 115 of the March 14, 2016 Answer).

¹⁶ Mr. Kohlhasse's March 29, 2016 Reply to Respondents' Answers, at 11.

V. Discussion

16. We will not dismiss the Complaint as the respondents request for being a collateral attack on prior certificate orders. The Complaint is based on noise and vibration experienced *after* the authorized facilities went into service. It would be unrealistic, if not inequitable, to require a potentially aggrieved person to anticipate and object to every theoretical adverse post-construction consequence in a certificate proceeding, or else be barred from subsequently seeking a remedy via a complaint. Accordingly, the fact that Mr. Kohlhasse did not introduce the issue of noise and vibration in prior certificate proceedings does not preclude him from raising the issue now in a complaint.

17. We will not sever Algonquin from this proceeding based on the fact that its facilities are not compressor facilities. We acknowledge the sections 380.12(k)(4)(v)(A) and (B) noise and vibration conditions are limited to compressor facilities. However, because Algonquin's pipeline facilities could contribute to the low-frequency noise and vibration claimed in the Complaint, we find it appropriate to include Algonquin as a respondent. In addition, the Algonquin facilities have previously undergone testing and modification as a part of efforts to identify and reduce sources of noise and vibration.

18. We do not believe the respondents' alleged procedural deficiencies constitute cause to refuse to consider the merits of the Complaint. However, after consideration of the merits, for the reasons discussed below, we concur with the respondents' position that neither is in violation of any statutory or regulatory requirement regarding noise or vibration associated with their facilities at the Brookfield Compressor Station.¹⁷

19. The Complaint alleges that low-frequency noise and vibration perceived at the Kohlhasse residence is produced by Iroquois and/or Algonquin facilities at the Brookfield Compression Station and constitutes a violation of sections 380.12(k)(4)(v)(A) and (B), which require an application for certificate authority to construct new compressor facilities to:

(4) Provide a quantitative estimate of the impact of the project on noise levels at noise-sensitive areas, such as schools, hospitals, or residences.

* * *

¹⁷ See 18 C.F.R. § 385.206(a) (2016), which states that a complaint must allege a "contravention or violation of any statute, rule, order, or other law administered by the Commission, or for any other alleged wrong over which the Commission may have jurisdiction."

(v) The estimate must demonstrate that the project will comply with applicable noise regulations and show how the facility will meet the following requirements:

(A) The noise attributable to any new compressor station, compression added to an existing station, or any modification, upgrade or update of an existing station, must not exceed a day-night sound level (L_{dn}) of 55 dBA at any pre-existing noise-sensitive area (such as schools, hospitals, or residences).

(B) New compressor stations or modifications of existing stations shall not result in a perceptible increase in vibration at any noise-sensitive area.

20. Respondents properly characterize these sections as descriptions of information applicants are to include in Resource Report 9, and not as requirements of compressor facilities' operation. As a condition of a certificate authorization, we routinely state that a compressor facility's operation shall not exceed a noise limit of 55 dBA L_{dn} . We followed this practice with the Brookfield Compressor Station and directed Iroquois to submit post-construction noise surveys to confirm compliance with this noise limit.¹⁸ Our review of the Iroquois' noise surveys and our own on-site measurements confirm that Iroquois' and Algonquin's facilities' operation conform to the noise limit specified in the companies' certificate authorizations. We note the noise level does not exceed 55 dBA L_{dn} even when both of the Brookfield Compressor Station units are operating at full load.

21. The Complaint errs in seeking to treat the description of the contents of Resource Report 9, which must be submitted to support a certificate *application*, as a description of certificate *conditions*. While we included the noise limit as described in section 380.12(k)(4)(v)(A) of the regulations as a certificate condition, we did not include vibration as described in section 380.12(k)(4)(v)(B) as a certificate condition. Regulated entities are bound by the terms of the authorizations we issue, as well as by the laws, orders, and regulations that impose specific obligations on them. A description of information to be included in an exhibit, however, is not a binding operating requirement.

¹⁸ As noted above, Iroquois' initial noise survey following installation of a second compressor unit did not demonstrate compliance. Consequently, Iroquois was compelled to make modifications to its facilities, after which it submitted another survey that confirmed noise generated by its expanded compressor station did not exceed an L_{dn} of 55 dBA.

22. Section 380.12(k)(4)(v)(A) requires certificate applicants to include information in Resource Report 9 to show how they intend to limit noise from compression stations to 55 dBA L_{dn} at noise-sensitive areas. This is a quantifiable, widely applied, and well accepted industry standard that Commission orders authorizing compression facilities routinely include as a certificate condition.¹⁹ It is the certificate condition applicable to the operation of compressor facilities, and not section 380.12(k)(4)(v)(A), which limits noise to 55 dBA L_{dn} .

23. There is no equivalent quantifiable, widely applied, and well accepted industry standard with respect to vibration. Thus, while Commission certificate orders approving compression facilities routinely recite a noise limit, they do not typically include a condition to limit vibration to a specific level. Because there is no consensus on a quantifiable vibration standard, section 380.12(k)(4)(v)(B) uses the subjective and non-specific term “perceptible increase” to ensure that certificate applicants proposing new compression facilities take into account the potential for their facilities to cause vibration in designing their projects.

24. The respondents, the Commission, PHMSA, the local electric utility, and the compressor unit manufacturer have studied noise and vibration in this case, and have been unable to establish a definitive link between the compressor station’s operations and the low-frequency noise and vibration described by Mr. Kohlhasse at his residence. While we reach no finding on whether the respondents’ facilities could be a cause of low-frequency noise or vibration at Mr. Kohlhasse’s residence, we do find that the respondents have made a good faith effort to investigate this matter, and as discussed herein, have

¹⁹ See, e.g., *Millennium Pipeline Co, L.L.C.*, 117 FERC ¶ 61,319, authorizing the installation of Iroquois’ second compressor unit subject to Environmental Condition 52, requiring that:

Iroquois shall make all reasonable efforts to ensure that its predicted noise levels from the Brookfield compressor station are not exceeded at nearby NSAs, and file a noise survey with the Secretary and the CSC **no later than 60 days** after placing the new compressor station in-service. However, if the noise attributable to the operation of the compressor station at full load exceeds an L_{dn} of 55 dBA at any nearby NSAs, Iroquois shall file a report on what changes are needed and install additional noise controls to meet that level **within one year** of the in-service date. Iroquois shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

sought to address Mr. Kohlhasé's concerns by making reasonable modifications to their facilities.

25. We affirm the respondents' assertion that they are currently in compliance with the noise-related conditions of their certificates applicable to the operation of the Brookfield Compressor Station. Further, we do not find the respondents to be in violation of any other noise-related statute or regulation over which we may have jurisdiction. Finding no wrong to remedy, we dismiss the Complaint.

The Commission orders:

Mr. Kohlhasé's Complaint is dismissed, for the reasons discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.