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April 14, 2023

VIA U.S. MAIL

Mr. Steve Kahl
Executive Secretary Director
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

RE: SCS Carbon Transport LLC
Midwest Carbon Express Project
Case No. PU-22-391

Dear Mr. Kahl:

Please find enclosed herewith for filing with the North Dakota Public Service Commission, an original and five (5) copies of the following:

1. Memo dated December 19, 2022 prepared by Tetra Tech, In. regarding the results of the noise study analysis of the pump stations; and

2. Right-of-Way Progress Chart current as of April 10, 2023.

Also enclosed herewith, please find a Compact Disc (CD) containing this letter and the above-referenced documents in PDF format.

Should you have any questions, please advise.

Sincerely,

/s/ Lawrence Bender

LAWRENCE BENDER

LB/tjg
Enclosures
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TETRA TECH

MEMO

To:	Summit Carbon
From:	Tetra Tech, Inc.
Date:	December 19, 2022
Subject:	Midwest Carbon Express Project – Pump Station, Screening-level Acoustic Analysis

Tetra Tech, Inc. (Tetra Tech) conducted a screening-level acoustic modeling analysis of the pump stations proposed as part of the Midwest Carbon Express Project. The Cadna-A® computer noise model was used to calculate sound pressure levels from the operation of Project pump stations. An industry standard, Cadna-A was developed by DataKustik to provide an estimate of sound levels at distances from sources of known sound emission. It is used by acousticians and acoustic engineers due to the capability to accurately describe noise emission and propagation from complex facilities and in most cases yields conservative results of operational noise levels in the surrounding community.

The current International Organization for Standardization standard for outdoor sound propagation, ISO 9613 Part 2 – "Attenuation of sound during propagation outdoors," was used within Cadna-A. The method described in this standard calculates sound attenuation under weather conditions that are favorable for sound propagation, such as for downwind propagation or moderate atmospheric inversion. Sound attenuation through foliage and diffraction around and over existing offsite anthropogenic structures such as buildings was ignored. The Project-specific sound sources were included in the model as a combination of point sources (i.e., control valves), and area sources (i.e., pump station building). Representative octave band sound power data were used to characterize the onsite equipment.

The two primary noise-generating sources identified onsite were the pump motors, which will be housed within the pump building, and control valves, which will be unenclosed outside of the pump building. Based on vendor information it is anticipated that the pump motors will emit 84 dBA at 1 meter while the control valves will emit 87 dBA at 1 meter. Table summarizes the equipment sound power level data used as inputs to the modeling analysis.

Table 1. Modeled Octave Band Sound Power Information for Pump Station Equipment

Equipment	Octave Band Sound Power Level (dBL) by Frequency (Hz)									Broadband (dBA)
	31.5	63	125	250	500	1000	2000	4000	8000	
Pump Motor	89	97	96	89	89	93	81	71	65	94
Control Valve	97	92	91	93	92	95	85	85	80	97

In addition, the pump motors will be housed within the pump station building. A transmission loss rating was incorporated into the wall and roof assemblies based on a Sound Transmission Class (STC) ratings to reduce noise propagation. The STC rating for the pump building wall and roof assembles is described in Table 2.

Table 2. Noise Level Reduction for Pump Building

Type of Construction or Acoustical Treatment	Modeled Noise Level Reduction by Octave Band Frequency (dBL)								
	31.5	63	125	250	500	1000	2000	4000	8000
Wall/Roof Panel STC 39	5	5	33	36	39	44	53	57	5

It was assumed that three pump motors will be located within the building while one control valve will be positioned outside of the building. Broadband (dBA) sound pressure levels were calculated at an elevation of 1.5 meters (5 feet) above the ground, the height of the ears of a standing person, for expected normal pump station operation assuming that all components identified in Table 1 are operating continuously and concurrently at the representative manufacturer-rated sound levels. The sound energy was then summed to determine the equivalent A-weighted sound pressure level at a point of reception during normal operation.

Predicted received sound levels are expected to be 43 dBA at a distance of 500 feet from the pump station building and 37 dBA at a distance of 1,000 feet from the pump station building. Information available during the initial engineering phases is at a conceptual level and does not allow design details to be finalized including specific equipment selection and/or mitigation measures. If necessary, a more refined acoustic modeling analysis will be conducted prior to Project constriction to successfully demonstrate compliance with applicable noise regulations and requirements, as appropriate.

SUMMIT CARBON SOLUTIONS

SCS ROW Progress as of April 10th, 2023						
North Dakota	Parcels	ROW Miles	ROW Miles Executed	ROW Miles Executed %	Parcels Executed	Parcels Executed %
Burleigh	121	41.78	24.99	59.80%	67	55.37%
Cass	63	21.75	16.02	73.68%	46	73.02%
Dickey	91	36.76	23.63	64.29%	57	62.64%
Emmons	102	37.10	22.90	61.72%	61	59.80%
Logan	6	1.83	1.83	100.00%	5	83.33%
McIntosh	110	34.24	26.55	77.52%	84	76.36%
Morton	56	23.45	20.72	88.34%	49	87.50%
Oliver	51	18.46	17.04	92.28%	47	92.16%
Richland	171	65.11	36.13	55.49%	100	58.48%
Sargent	98	39.53	31.94	80.80%	74	75.51%
Grand Total	**869**	**320.02**	**221.75**	**69.29%**	**590**	**67.89%**

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

SCS Carbon Transport LLC
Midwest Carbon Express CO2 Project
Sitting Application

CASE NO. PU-22-391

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that a true and correct copy of the following:

1. Letter to S. Kahl forwarding documents for filing;
2. Memo dated December 19, 2022 prepared by Tetra Tech, In. regarding the results of the noise study analysis of the pump stations; and
3. Right-of-Way Progress Chart current as of April 10, 2023.

were, on April 14, 2023, filed electronically via email and served electronically to the following:

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Dated this 14th day of April, 2023.

FREDRIKSON & BYRON, P.A.

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