

400 North Fourth Street
Bismarck, ND 58501
(701) 222-7900

February 24, 2020

Executive Secretary
ND Public Service Commission
State Capitol Building
Bismarck, ND 58505

Re: Heskett 4 Certification
Case No. PU-20-_____

Montana-Dakota Utilities Co. (Montana-Dakota) herewith submits the Certification provided in Exhibit 1 subject to changes proposed to the December 12, 2012 Certification submitted on this day in Case No. PU11-631. This filing is made in accordance with North Dakota Century Code 49-22-03(3) governing the statutory certification procedure that provides for an exemption from the siting process for certain activities including the construction of the same type of facility as the existing type facility. Montana-Dakota herewith submits its intention to add a second 88 megawatt (MW) natural gas simple cycle combustion turbine (SCCT) and associated facilities directly adjacent to the existing SCCT within the project area identified in Certificate of Site Compatibility No. 32 issued by the North Dakota Public Service Commission (Commission) on December 21, 2012 (Certificate No. 32).

The following exhibits are provided in support of Montana-Dakota's intention to add the second 88 MW SCCT referred to as Heskett 4 as part of Certificate No. 32 in accordance with N.D.C.C. § 49-22-03(3):

- Exhibit 1 – Certification signed by Mr. Jay Skabo, Vice President of Energy Supply
- Exhibit 2 - Site map showing the location of the second SCCT to be located adjacent to the existing SCCT.
- Exhibit 3 – A summary of the project and updates to the certain sections of the initial application for a Certificate of Site Compatibility in Case No. PU-11-631, in support of the Certification provided in Exhibit 1.

It is the Company's understanding that Commission Staff will raise any concerns regarding this intent to construct the Heskett 4 turbine within 30 days of this filing, otherwise the Commission will acknowledge receipt of the Company's intention to construct the Heskett 4 turbine within the site designated under Certificate No. 32.

Please refer all inquiries regarding this filing to:

Tamie Aberle
Director of Regulatory Affairs
Montana-Dakota Utilities Co.
400 N 4th Street
Bismarck, ND 58501
tamie.aberle@mdu.com

Joseph Geiger
Director of Generation
Montana-Dakota Utilities Co.
400 N 4th Street
Bismarck, ND 58501
joseph.geiger@mdu.com

Also, please send copies of all written inquiries, correspondence and pleadings to:

Mr. Karl Liepitz
Assistant General Counsel
MDU Resources Group, Inc.
P.O. Box 5650
Bismarck, ND 58506-5650
karl.liepitz@mduresources.com

Sincerely,



Tamie A. Aberle
Director of Regulatory Affairs

Cc: Karl Liepitz
Joseph Geiger
Jay Skabo

Exhibit 1

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Montana-Dakota Utilities Co.
Heskett 4 88 MW Gas Turbine
Siting Exclusion Certification

Case No. PU-20-_____

CERTIFICATION RELATING TO N.D.C.C. § 49-22-03(3)(a)

Pursuant to N.D.C.C. § 49-22-03(3)(a), the undersigned, Jay Skabo, Vice President of Energy Supply, for Montana-Dakota Utilities Co. (Montana-Dakota), with the authority to bind Montana-Dakota to the following hereby certifies as follows:


1. On December 21, 2012, in Case No. PU-11-631, the North Dakota Public Service Commission (Commission) issued Certificate of Site Compatibility No. 32 to Montana-Dakota for the construction and operation of an 88 MW Simple Cycle Combustion Turbine (SCCT) and associated facilities to be located adjacent of the R.M. Heskett Station in Morton County, North Dakota (Certificate No. 32).
2. Pursuant to N.D.C.C. § 49-22-03(3)(a), Montana-Dakota proposes to install a second 88 MW Simple Cycle Combustion Turbine and associated facilities adjacent to the 88 MW SCCT sited in Case No. PU-11-631.
3. The components of the proposed SCCT would remain consistent with the existing SCCT.
4. In addition to the equipment associated with the proposed SCCT itself, the existing multi-purpose Service Building near the SCCTs would be expanded to add additional office space for personnel. The Service Building currently houses a control room, a maintenance shop, a parts warehouse, an electrical switchgear room, and space for other service-related equipment. A new service water tank for evaporative cooling water may also be located on-site near the Service Building. The Onsite Wastewater Treatment System (OWTS), which includes a septic tank and leach field, may be expanded as needed for the additional personnel. The OWTS would serve the Service Building and would be designed per the Morton County Custer Health District regulations and NDAC 62-03.1-03 for Private Sewage Disposal Systems.
5. The proposed SCCT would be fueled by natural gas, supplied by an existing 24-mile natural gas pipeline that interconnects with the Northern Border Pipeline. An existing natural gas regulation station at the SCCT site may require an additional natural gas fired line heater, and a natural gas conditioning and regulation skid. A new natural gas fueled emergency generator may also be added. The natural gas pipeline was permitted under a separate application to the PSC (Case No. PU-11-680) and is owned and operated by Montana-Dakota.

6. Installation and operation of the proposed SCCT, planned to be in conjunction with and closely following the permanent shutdown of the two coal units at the Heskett Station, would not result in an increase in significant emissions of criteria pollutants or greenhouse gases. A new Air Permit Application will be submitted to the North Dakota Department of Environmental Quality for the proposed SCCT in early 2020. Air emission calculations, air modeling results, and the regulatory applicability to the SCCT will be addressed in detail in the air permit application.
7. The proposed SCCT would be expected to result in predicted noise levels approximately 3 dB(A) greater than those modeled in the original sound assessment for the existing SCCT (66.7 dB(A) at a distance of 250 feet), for an expected noise level of 69.7 dB(A). An increase of 3 dB(A) is barely detectable by the human ear (Federal Highway Administration 2011). In addition, 69.7 dB(A) would still be below the requirements of the industrial ordinance of 75 and 80 dB(A) at a distance of 250 feet from the source. Given the nearly imperceptible increase in noise generated by the proposed SCCT, combined with the fact that two lignite coal units will be shut down prior to commercial operations of the proposed SCCT, it is anticipated the proposed SCCT would not cause a perceptible increase in the existing sound levels for adjacent residents and would remain in compliance with the City of Mandan's industrial ordinance. No mitigation for noise impacts are required, though noise levels will be taken into consideration in the design of the proposed SCCT.
8. Since the original application for the existing SCCT, the Dakota skipper (threatened [T]) has been listed as threatened under the Endangered Species Act in Morton County. The Dakota skipper is a small butterfly that relies on healthy native prairie within its current range of North Dakota, South Dakota, Minnesota, Manitoba, and Saskatchewan to complete its life cycle (USFWS 2014b). Critical habitat for the Dakota skipper was designated by the USFWS in 2015. There are no areas of critical habitat that occur in Morton County (USFWS 2015). The proposed SCCT and associated facilities will be constructed on an already existing gravel pad. Therefore, the project is not anticipated to impact the Dakota skipper or its associated habitat
9. Since the original application for the existing SCCT, the northern long-eared bat (T) has been listed as threatened under the Endangered Species Act in Morton County. The northern long-eared bat is a medium-sized bat that occurs across central, eastern and northern portions of the United States and across Canada. In a statewide survey of bat distribution in North Dakota, the species was recorded in the Missouri River Valley, Turtle Mountains, and Badlands. There are no known hibernacula or maternity roost trees within the Project Area. The main factor affecting recovery of the species is dramatic population decline due to the fungal disease, white-nose syndrome (Duttenhefner 2018; Isakson 2018; Larson 2018; USFWS 2013a; USFWS 2014c). Morton County is within the White-nose Syndrome Zone; however, the county is not known to have infected hibernacula or bats (USFWS 2016; USFWS, 2019). Summer habitat for the northern long-eared bat in the form of building structures is very limited in the Project Area. The primary building structure is the multi-purpose Service Building; however, it is not

directly linked to treed habitat that directly links to forested areas. Due to the lack of hibernacula and forested areas within the Project Area, the project is not anticipated to impact the northern long-eared bat.

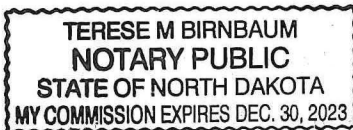
- 10. Since the original application for the existing SCCT, the Rufa red knot (T) has been listed as threatened under the Endangered Species Act for Morton County. The Rufa red knot is a medium-sized shorebird. Threats to the red knot include sea level rises and changes in migration timing due to climate change, competition for and loss of prey sources, and human disturbance and development in their stopover, breeding, and wintering grounds (USFWS 2013b; USFWS 2014a). There are no suitable sand or gravel bars, tidal mud flats, salt marshes, or peat banks within the Project Area. Therefore, the project is not anticipated to impact the Rufa red knot.
- 11. Montana-Dakota will obtain any necessary permits or update any existing permits as applicable.
- 12. Project construction will occur wholly within the designated site under Certificate No. 32.
- 13. Activities associated with the construction of the proposed SCCT will not affect known Exclusion or Avoidance areas set forth in N.D. Admin Code § 69-06-08-01.
- 14. Montana-Dakota will continue to comply with all applicable conditions and protections in the siting laws and rules and Commission Orders previously issued in conjunction with Certificate No. 32.

Dated this 24th day of February 2020.


 Jay Skabo
 Vice President of Energy Supply
 Montana-Dakota Utilities Co.

STATE OF NORTH DAKOTA)
)
 COUNTY OF BURLEIGH)

Subscribed and sworn to before me, a Notary Public for the state and county above named, this 24th day of February 2020.



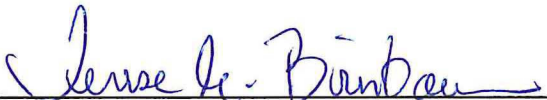
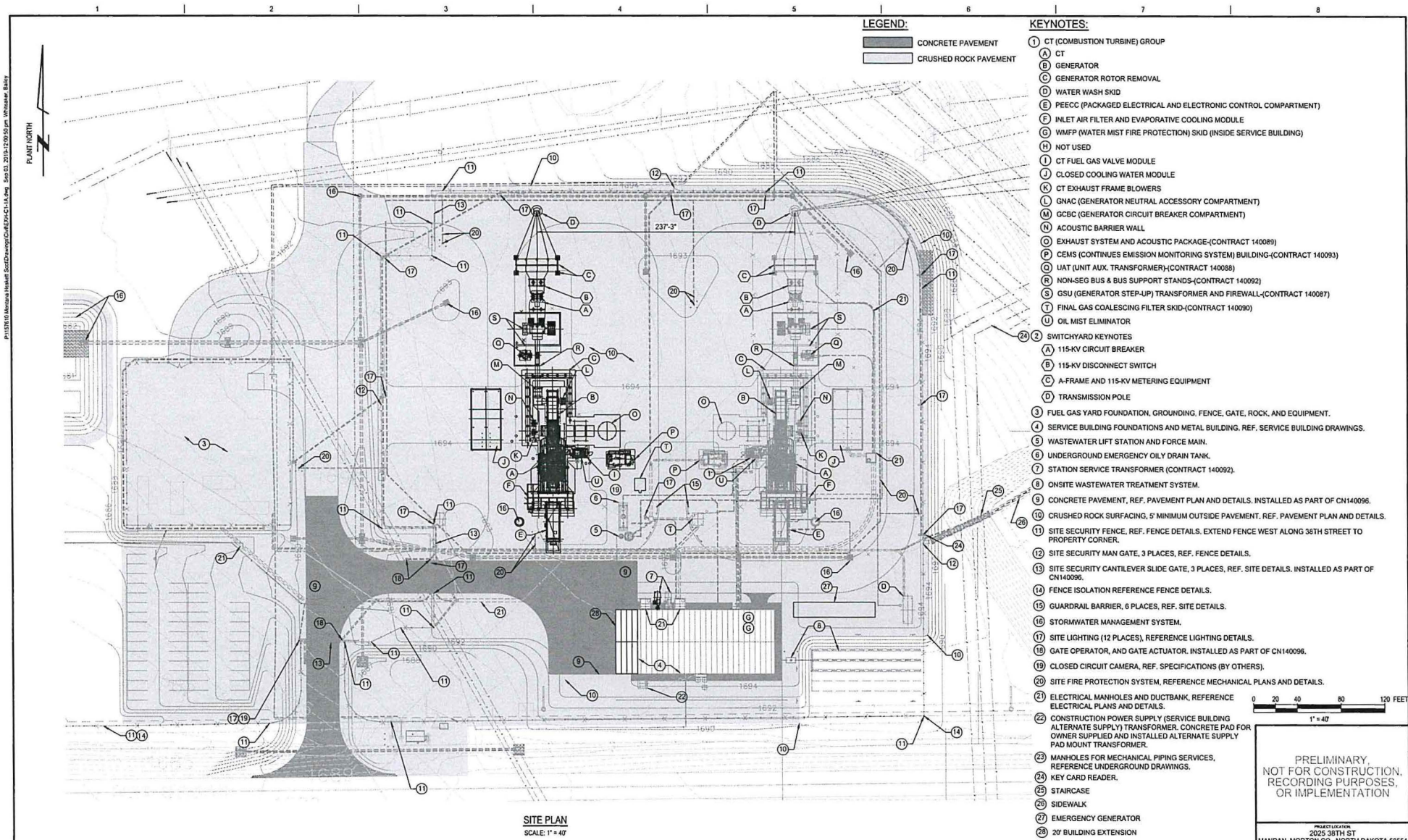

 Terese M. Birnbaum, Notary Public
 Burleigh County, North Dakota
 My Commission Expires: 12/30/2023

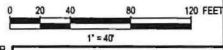
Exhibit 2



- LEGEND:**
- CONCRETE PAVEMENT
 - CRUSHED ROCK PAVEMENT

- KEYNOTES:**
- 1 CT (COMBUSTION TURBINE) GROUP
 - A CT
 - B GENERATOR
 - C GENERATOR ROTOR REMOVAL
 - D WATER WASH SKID
 - E PECCC (PACKAGED ELECTRICAL AND ELECTRONIC CONTROL COMPARTMENT)
 - F INLET AIR FILTER AND EVAPORATIVE COOLING MODULE
 - G WMFP (WATER MIST FIRE PROTECTION) SKID (INSIDE SERVICE BUILDING)
 - H NOT USED
 - I CT FUEL GAS VALVE MODULE
 - J CLOSED COOLING WATER MODULE
 - K CT EXHAUST FRAME BLOWERS
 - L GNAC (GENERATOR NEUTRAL ACCESSORY COMPARTMENT)
 - M GCBC (GENERATOR CIRCUIT BREAKER COMPARTMENT)
 - N ACOUSTIC BARRIER WALL
 - O EXHAUST SYSTEM AND ACOUSTIC PACKAGE-(CONTRACT 140089)
 - P CEMS (CONTINUOUS EMISSION MONITORING SYSTEM) BUILDING-(CONTRACT 140093)
 - Q UAT (UNIT AUX. TRANSFORMER)-(CONTRACT 140088)
 - R NON-SEG BUS & BUS SUPPORT STANDS-(CONTRACT 140092)
 - S GSU (GENERATOR STEP-UP) TRANSFORMER AND FIREWALL-(CONTRACT 140087)
 - T FINAL GAS COALESCING FILTER SKID-(CONTRACT 140090)
 - U OIL MIST ELIMINATOR
 - 20 SWITCHYARD KEYNOTES
 - A 115-KV CIRCUIT BREAKER
 - B 115-KV DISCONNECT SWITCH
 - C A-FRAME AND 115-KV METERING EQUIPMENT
 - D TRANSMISSION POLE
 - 3 FUEL GAS YARD FOUNDATION, GROUNDING, FENCE, GATE, ROCK, AND EQUIPMENT.
 - 4 SERVICE BUILDING FOUNDATIONS AND METAL BUILDING. REF. SERVICE BUILDING DRAWINGS.
 - 5 WASTEWATER LIFT STATION AND FORCE MAIN.
 - 6 UNDERGROUND EMERGENCY OILY DRAIN TANK.
 - 7 STATION SERVICE TRANSFORMER (CONTRACT 140092).
 - 8 ONSITE WASTEWATER TREATMENT SYSTEM.
 - 9 CONCRETE PAVEMENT, REF. PAVEMENT PLAN AND DETAILS. INSTALLED AS PART OF CN140096.
 - 10 CRUSHED ROCK SURFACING, 5' MINIMUM OUTSIDE PAVEMENT. REF. PAVEMENT PLAN AND DETAILS.
 - 11 SITE SECURITY FENCE, REF. FENCE DETAILS. EXTEND FENCE WEST ALONG 38TH STREET TO PROPERTY CORNER.
 - 12 SITE SECURITY MAN GATE, 3 PLACES, REF. FENCE DETAILS.
 - 13 SITE SECURITY CANTILEVER SLIDE GATE, 3 PLACES, REF. SITE DETAILS. INSTALLED AS PART OF CN140096.
 - 14 FENCE ISOLATION REFERENCE FENCE DETAILS.
 - 15 GUARDRAIL BARRIER, 6 PLACES, REF. SITE DETAILS.
 - 16 STORMWATER MANAGEMENT SYSTEM.
 - 17 SITE LIGHTING (12 PLACES), REFERENCE LIGHTING DETAILS.
 - 18 GATE OPERATOR, AND GATE ACTUATOR. INSTALLED AS PART OF CN140096.
 - 19 CLOSED CIRCUIT CAMERA, REF. SPECIFICATIONS (BY OTHERS).
 - 20 SITE FIRE PROTECTION SYSTEM, REFERENCE MECHANICAL PLANS AND DETAILS.
 - 21 ELECTRICAL MANHOLES AND DUCTBANK, REFERENCE ELECTRICAL PLANS AND DETAILS.
 - 22 CONSTRUCTION POWER SUPPLY (SERVICE BUILDING ALTERNATE SUPPLY) TRANSFORMER. CONCRETE PAD FOR OWNER SUPPLIED AND INSTALLED ALTERNATE SUPPLY PAD MOUNT TRANSFORMER.
 - 23 MANHOLES FOR MECHANICAL PIPING SERVICES, REFERENCE UNDERGROUND DRAWINGS.
 - 24 KEY CARD READER.
 - 25 STAIRCASE
 - 26 SIDEWALK
 - 27 EMERGENCY GENERATOR
 - 28 20' BUILDING EXTENSION

SITE PLAN
SCALE: 1" = 40'



PRELIMINARY,
NOT FOR CONSTRUCTION,
RECORDING PURPOSES,
OR IMPLEMENTATION

PROJECT LOCATION:
2025 38TH ST
MANDAN, MORTON CO., NORTH DAKOTA 58554

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INTER-DISCIPLINE REVIEW																
DISC	ARCH	CIVIL	ELECT	I&C	MECH	STRUCT	D	ISSUED WITH FINAL STUDY REPORT	09/04/19	BLW	BHR	SMT	CMD	DRN	BRG	06/17/19
							C	ISSUED WITH SCCT STUDY	08/12/19	NLI	BHR	SMT	CMD	CKD	SMT	09/04/19
							B	ISSUED WITH SCCT STUDY	07/19/19	NLI	BHR	SMT	CMD			
							A	ISSUED WITH SCCT STUDY	06/17/19	BLW	BHR	SMT	CMD			
							REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	SCALE: 1" = 40'		
													FOR 2D/CAD DWG ONLY			

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

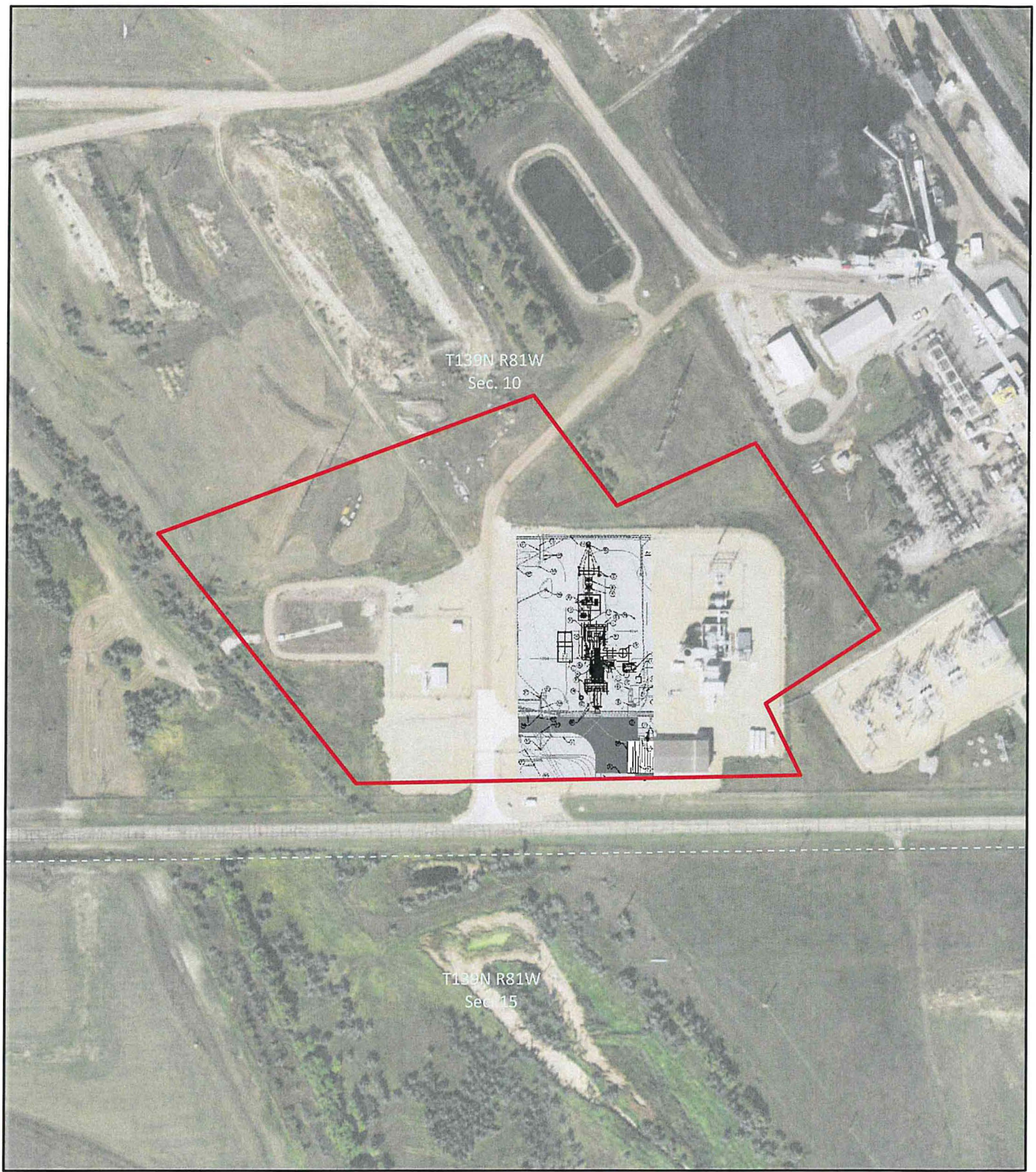
POWER ENGINEERS
16041 FOSTER, P.O. BOX 1090
OVERLAND PARK, KANSAS 66068-1090
(913) 681-2981 www.powereng.com
CERTIFICATE OF REGISTRATION NO. 3-00002

MONTANA-DAKOTA UTILITIES CO.
MONTANA-DAKOTA UTILITIES CO.
HESKETT UNIT 4
OVERALL SITE PLAN

JOB NUMBER
157610

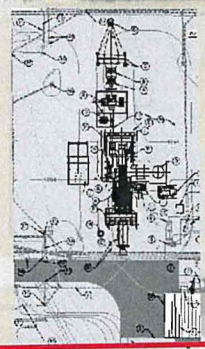
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EXH-C1-1A



T139N R81W
Sec. 10

T139N R81W
Sec. 15



**Figure 2 - Facility Layout
Montana-Dakota Utilities Co.
Morton County, ND**

 Study Area

Imagery Source: ©2018, USDA-FSA-APFO
 KLJ Project Number: 1909-01604
 Date Created: 10/1/2019
 Created By: jeffprice

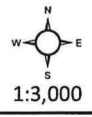
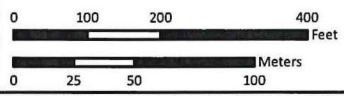


Exhibit 3

Exhibit 3

Amendment to Certificate of Site Compatibility

Montana-Dakota Utilities Co.

88 MW Natural Gas Simple Cycle Combustion Turbine
Morton County, North Dakota



MONTANA-DAKOTA
UTILITIES CO.

PU-11-631

Prepared for: Montana-Dakota Utilities Co.

Prepared by: KLJ

November 2019

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Appendix A: Figures

1.0 Introduction

Montana-Dakota Utilities Co. (Montana-Dakota) is providing updated project information and seeking approval of an amendment to the Certificate of Site Compatibility issued in Case No: PU-11-631. Montana-Dakota is proposing to construct a second 88 megawatt (MW) natural gas simple cycle combustion turbine (SCCT) and associated facilities on the R.M. Heskett Station (Heskett Station). The proposed SCCT would be directly adjacent to the existing SCCT and would remain within the Project Area identified in the original application and Certificate No. 32 of Site Compatibility for Energy Conversion Facility issued by the Commission in the above referenced case. Additionally, modifications to the 115 kilovolt (kV) transmission line would occur for interconnect purposes. The purpose of this amendment is to request approval of a change in the project facilities consistent with the North Dakota *Energy Conversion and Transmission Facility Siting Act*. The following sections of Montana-Dakota's initial application for a Certificate of Site Compatibility in Case No. PU-11-631 have been revised to reflect the proposed project information to construct a second 88 MW SCCT at Heskett Station.

1.4 Project Schedule

Construction of the proposed SCCT and modifications to the transmission line are anticipated to begin in the first quarter of 2022 and commercial operation is targeted for the first quarter of 2023.

2.0 Need for Facility

The need for the proposed SCCT is supported in Montana-Dakota's 2019 Integrated Resource Plan submitted to the Public Service Commission (PSC) on July 1, 2019, (Case No. PU-19-221) and the Application for an Advanced Determination of Prudence submitted to the PSC on August 28, 2019, (Case No. PU-19-306) where complete details of the various analyses used by Montana-Dakota are available. Based on the analysis of the resource expansion models and the consideration of customer impacts, market availability of capacity and energy, availability of Midcontinent Independent System Operator electric transmission interconnect rights following retirement of Heskett Station Unit 1 & 2 coal-fired generators, and other factors such as environmental regulations and the balance of its generation mix, Montana-Dakota identified a series of actions to meet its projected demand. One action identified by these efforts is the 88 MW SCCT proposed in this amendment.

2.3 Ten Year Plan

In accordance with North Dakota Century Code (NDCC) Section 49-22-04 and North Dakota Administrative Code (NDAC) Chapter 69-06-02, Montana-Dakota will submit an updated Ten-Year Plan for years 2020-2030. The Plan will be consistent with this amendment.

4.2 Layout of the Facility

The components of the proposed SCCT would remain consistent with the existing SCCT. To view the proposed layout of the facility, refer to **Appendix A, Figures**.

4.3 Associated Facilities

In addition to the equipment associated with the SCCT itself, the existing multi-purpose Service Building near the SCCT would be expanded to add additional office space for personnel. The Service Building currently houses a control room, a maintenance shop, a parts warehouse, an electrical switchgear room, and space for other service-related equipment. A new service water tank for evaporative cooling water may also be located on-site near the Service Building.

The Onsite Wastewater Treatment System (OWTS), which includes a septic tank and leach field, may be expanded as needed for the additional personnel. The OWTS would serve the Service Building and would

be designed per the Morton County Custer Health District regulations and NDAC 62-03.1-03 for Private Sewage Disposal Systems.

The SCCT would be fueled by natural gas, supplied by an existing 24-mile natural gas pipeline that interconnects with the Northern Border Pipeline. An existing natural gas regulation station at the SCCT site may require an additional natural gas fired line heater, new emergency generator and a natural gas conditioning and regulation skid. The natural gas pipeline was permitted under a separate application to the PSC (Case No. PU-11-680) and is owned and operated by Montana-Dakota.

Montana-Dakota plans to use the MISO generator replacement process to retain the electric transmission interconnection rights from the retirement of Montana-Dakota's R.M. Heskett Unit 1 and Unit 2 coal-fired generators for use with the new SCCT.

6.6 Project Operation and Maintenance

6.6.3 Operations and Maintenance Facility

The existing multi-purpose Service Building near the SCCT that houses a control room, a maintenance shop, a parts ware-house, an electrical switchgear room, and space for other service-related equipment, will be utilized for SCCT operation.

7.2 Demographics

The 2018 population estimates reported that the total population of Morton County was 31,095, with 22,519 people in Mandan. Median household income was estimated at \$65,385. Additionally, 8 percent of the county was below the poverty level (Census Bureau 2018).

7.2.1 Demographics Impacts/Mitigation

Direct, positive, economic impacts would result from the addition of several temporary construction jobs to the local economy when the proposed SCCT is being constructed. An additional three permanent jobs are expected to result from the proposed SCCT's construction and operation. The project may also indirectly benefit economies in surrounding communities due to the temporary construction jobs and increased spending at local businesses.

7.4 Air Quality

Montana-Dakota plans to submit a new Air Permit Application to the North Dakota Department of Environmental Quality (NDDEQ) for the additional proposed SCCT in early 2020. Air emission calculations, air modeling results (if necessary), and regulatory applicability to the SCCT will be addressed in detail in the air permit application.

The current federal and state air quality standards for criteria pollutants are summarized in *Table 1* along with the reported values taken from 2018 for the Bismarck area. North Dakota currently meets the standards for all criteria pollutants. The state also meets standards for fine particulates and the eight-hour ozone standards established by the Environmental Protection Agency (EPA) (NDDEQ 2019).

Table 1. Ambient Air Quality Standards and Monitoring Results

POLLUTANT	AVERAGING PERIOD	EPA AIR QUALITY STANDARD		NDDEQ AIR QUALITY STANDARD		BISMARCK RESIDENTIAL 2018 REPORTED DATA	
		µg/m ³	PARTS PER MILLION	µg/m ³	PARTS PER MILLION	µg/m ³	PARTS PER MILLION
SO ₂	1-hour	196	0.075	196	0.075	—	0.012
PM ₁₀	24-Hour	150	—	150	—	107	—
PM _{2.5}	24-Hour	35	—	35	—	18	—
	Weighted Annual Mean	12	—	12	—	5.5	—
NO ₂	1-hour	188	0.100	188	0.100	—	0.033
	Annual Mean	100	0.053	100	0.053	—	0.005
CO	1-Hour	40,000	35	40,000	35	—	0.82
	8-Hour	10,000	9	10,000	9	—	0.4
O ₃	8-Hour	147	0.07	147	0.07	—	0.055

The proposed SCCT would combust only natural gas fuel and would be equipped with GE's inherently low mono-nitrogen oxides (NO_x) formation combustion technology referred to as "dry low NO_x" (DLN). The SCCT is expected to supply peak demand power requirements and be permitted to operate up to 3,000 hours annually. The proposed SCCT may require an additional fuel line heater and a new emergency generator, both of which are considered insignificant emission sources under the Title V program.

After the proposed SCCT commences operation at Heskett Station, the Heskett Station Title V permit would be amended to include the permit limits, reporting, recordkeeping, and compliance monitoring requirements for the proposed SCCT. The combustion emissions, in tons per year, associated with the proposed SCCT are estimated to be approximately 40 percent of those provided in Montana-Dakota's initial SCCT application. A detailed explanation of emissions calculations will be provided in the air permit application to the NDDEQ.

The addition of the proposed SCCT would be in conjunction with and immediately follow the permanent shutdown of the two lignite coal units at the Heskett Station, which are directly adjacent to the Project Area. The air permitting of the proposed SCCT will detail how Prevention of Significant Deterioration (PSD) emissions netting will be utilized. PSD emissions netting is the process of considering certain previous and prospective emissions changes at an existing major source to determine if a "net emissions increase" of a pollutant will result from a proposed physical change or change in method of operation. It is important to note that when any emissions decrease is claimed, all source-wide creditable and contemporaneous emissions increases and decreases of the pollutant subject to netting are included in the PSD applicability determination. If the net emissions change is less than the Significant Emission Rate (SER) detailed in the PSD regulations, then the modification has "netted out" for that pollutant. Therefore, the pollutant is not subject to PSD review. As such, a best available control technology (BACT) analysis and modeling is not required for the pollutant, in most cases. Details will be provided in the air permit application documents, but no contemporaneous increases for pollutants at the facility are expected and PSD review is not expected to apply.

7.4.1. Air Quality Impacts/Mitigation

Installation and operation of the proposed SCCT and coal unit shutdowns would not result in an increase in significant emissions of criteria pollutants or greenhouse gases.

NAAQS Analysis

In accordance with the NDDEQ's (formerly the North Dakota Department of Health [(NDDOH)]) modeling guidance memo, an air dispersion modeling analysis is required for minor PSD projects if the change in potential emissions from an existing facility exceeds the specified amounts (NDDOH 2014). Details will be included in the air permit application after discussion with the NDDEQ. Based on emissions of both the proposed SCCT and the coal unit shutdowns, it is expected that the proposed SCCT will not be required to be modeled by the NDDEQ.

State Air Toxics Analysis

With the shutdown of the coal units and the proposed SCCT, it is expected that Heskett Station would remain an area source of Hazardous Air Pollutant (HAP) emissions. The North Dakota state air toxics policy will be used to assist in determining the health-related risks represented by proposed new HAP emissions. Modeling may or may not be required by the NDDEQ for this project. Full details regarding toxics will be included in the air permit application after discussion with the NDDEQ.

BACT Reviews

As part of the permit work for the existing SCCT, BACT reviews were completed for CO, NO_x, PM₁₀, PM_{2.5}, and Greenhouse Gases (GHGs) such as CO₂ since the existing SCCT's potential emissions of each of these pollutants surpassed the respective PSD SER thresholds.

As noted earlier, if the net emissions change is less than the SER detailed in the PSD regulations, then the modification has "netted out" for that pollutant. Therefore, the pollutant is not subject to PSD review and a BACT analysis and modeling is not required for the pollutant. It is expected that the net emissions change for the proposed SCCT in conjunction with the coal unit shutdowns will be less than the SER detailed in PSD regulations. However, it should be noted that some BACT technologies are still expected to be utilized for the proposed SCCT emissions control. Full details will be provided in the air permit application regarding all netting and turbine emission control technologies for the proposed SCCT.

7.7 Noise

A sound assessment was conducted as part of the original application for the existing SCCT in which a combination of field measurements and modeling was utilized. The assessment found that 1) predicted noise levels for the nearest residents (approximately 1,200 feet away; 46.9 to 50.9 A-weighted decibels [dB(A)]) resulting from the existing SCCT would not cause a perceptible increase in sound over the measured existing sound levels (51 dB(A)) and 2) the predicted noise level at 250 feet from the existing SCCT (66.7 dB(A)) was below the noise levels set by the City of Mandan's industrial ordinance (75 dB(A) from 11 pm to 7 am and 80 dB(A) from 7 am to 11 pm).

7.7.1 Noise Impacts/Mitigation

The proposed SCCT would be adjacent to and comparable to the existing SCCT. Sound pressure from two equal sources is 3 dB(A) greater than the sound pressure level of just one source. In other words, a doubling of the noise source produces only a 3 dB(A) increase in the sound pressure level. Therefore, the addition of a proposed SCCT would be expected to result in predicted noise levels approximately 3 dB(A) greater than those modeled in the original sound assessment (66.7 dB(A) at a distance of 250 feet), for an expected noise level of 69.7 dB(A). An increase of 3 dB(A) is barely detectable by the human ear (Federal Highway Administration 2011). In addition, 69.7 dB(A) would still be below the requirements of the industrial ordinance of 75 and 80 dB(A) at a distance of 250 feet from the source. Given the nearly imperceptible increase in noise generated by the proposed SCCT, combined with the fact that two lignite coal units will be shut down prior to commercial operations of the proposed SCCT, it is anticipated that the proposed SCCT will not cause a perceptible increase in the existing sound levels for adjacent residents and would

remain in compliance with the City of Mandan's industrial ordinance. No mitigation for noise impacts are required, though noise levels will be taken into consideration in the SCCT design.

7.17 Rare and Unique Natural Resources

7.17.1 Threatened and Endangered Species

Dakota Skipper (*Hesperia dacotae*)

Since the original application, the Dakota skipper (threatened [T]) has been listed in Morton County. The Dakota skipper is a small butterfly that relies on healthy native prairie within its current range of North Dakota, South Dakota, Minnesota, Manitoba, and Saskatchewan to complete its life cycle (USFWS 2014b). The Dakota skipper overwinters as larvae in shelters at ground level, relying on medium-stature native grasses, such as prairie dropseed (*Sporobolus heterolepis*), little bluestem (*Schizachyrium scoparium*), and sideoats grama (*Bouteloua curtipendula*) for growth and survival to complete one generation per year. The adult Dakota skipper requires a diversity of flowering forbs as a nectar source during its flight period from late June to early or mid-July. Two preferred adult habitat types have been identified throughout the range of the Dakota skipper, consisting of moist bluestem prairie (Type A) and upland mixed-grass prairie (Type B) (Cochrane and Delphey 2002).

Type A habitat consists of tall-grass prairie, typically found in eastern North Dakota. Type A habitat is dominated by bluestem species (*Andropogon gerardii* and *Schizachyrium scoparium*) and almost always contains prairie lilies (*Lilium philadelphicum*), harebells (*Campanula rotundifolia*), and smooth camas (*Zigadenus elegans*). Type B habitat occurs in mixed-grass prairie on ridges and hillsides in western North Dakota and is dominated by bluestems and needlegrasses (*Nassella viridula*, *Hesperostipa comata*, and *Hesperostipa spartea*). Purple coneflower (*Echinacea angustifolia*), prairie coneflower (*Ratibida columnifera*), and blanketflower (*Gaillardia aristata*) are reliable indicators of Type B habitat, although prairie lilies and harebells may also be present (Cochrane and Delphey 2002).

Critical habitat for the Dakota skipper was designated by the USFWS in 2015. There are no areas of critical habitat that occur in Morton County (USFWS 2015).

Northern Long-Eared Bat (*Myotis septentrionalis*)

Since the original application, the northern long-eared bat (T) has been listed in Morton County. The northern long-eared bat is a medium-sized bat that can be found across central, eastern and northern portions of the United States and across Canada. In a statewide survey of bat distribution in North Dakota, the species was recorded in the Missouri River Valley, Turtle Mountains, and Badlands. During the summer, northern long-eared bats occur in forested areas, especially old growth and late successional forests where dead and dying trees provide roosting habitat, although it will occasionally roost in buildings. From mid-summer to fall, northern long-eared bats move to hibernacula (i.e., overwintering sites such as caves, abandoned mines, or similar constructions) to breed and hibernate. The distance between roosts and hibernacula can range from 5 to 168 miles. There are no known hibernacula or maternity roost trees within the Project Area. The main factor affecting recovery of the species is dramatic population decline due to the fungal disease, white-nose syndrome (Duttenhefner 2018; Isakson 2018; Larson 2018; USFWS 2013a; USFWS 2014c).

The USFWS published a final 4(d) rule for the northern long-eared bat that went into effect on February 16, 2016. The rule identifies prohibitions that aim to protect the bat's sensitive life stages in areas affected by white-nose syndrome. The 4(d) rule focuses on protecting bats when and where they are most vulnerable: maternity roost trees during pup-rearing in June and July pup-rearing and at hibernation sites within the White-nose Syndrome Zone. Morton County is within the White-nose Syndrome Zone; however, the county is not known to have infected hibernacula or bats (USFWS 2016; USFWS, 2019).

Rufa Red Knot

Since the original application, the Rufa red knot (T) has been listed for Morton County. The Rufa red knot is a medium-sized shorebird. Red knots make one of the longest distance migrations known, migrating up to 19,000 miles annually between breeding grounds in northern Canada or Alaska, and wintering grounds in northeast Gulf of Mexico and northern South America. While a majority of red knots follow migration routes along the east or west coasts of North America, small numbers of this species follow an inland migration route, which may include stopovers in the Great Plains, including North Dakota. Preferred stopover habitat includes sandy or gravelly beaches, tidal mudflats, salt marshes, shallow coastal impoundments, and peat banks. There can be great individual and population-level consequences when stopover sites are lost or degraded. Threats to the red knot include sea level rises and changes in migration timing due to climate change, competition for and loss of prey sources, and human disturbance and development in their stopover, breeding, and wintering grounds (USFWS 2013b; USFWS 2014a).

7.17.3 Threatened and Endangered Species Impacts/Mitigation

The proposed SCCT and associated facilities will be constructed on an already existing gravel pad. Therefore, the project is not anticipated to impact the Dakota skipper or its associated habitat.

Summer habitat for the northern long-eared bat in the form of building structures is very limited in the Project Area. The primary building structure is the multi-purpose Service Building; however, it is not directly linked to treed habitat that directly links to forested areas. Due to the lack of hibernacula and forested areas within the Project Area, the project is not anticipated to impact the northern long-eared bat.

There are no suitable sand or gravel bars, tidal mud flats, salt marshes, or peat banks within the Project Area. Therefore, the project is not anticipated to impact the Rufa red knot.

9. Agency Coordination

A second agency solicitation was not conducted because the proposed SCCT is located within the initial Project Area.

10. Identification of Potential Permits/Approvals

The following permits may be required prior to construction:

- Acid Rain Permit – NDDEQ
- Building Permit – City of Mandan
- Amendment to Certificate of Site Compatibility – Public Service Commission
- Electrical Permit – North Dakota Electrical Board
- Morton County Transportation Permit – Morton County
- National Pollutant Discharge Elimination System Permit – General Construction Stormwater Discharge Permit NDR10-0000 – NDDEQ
- National Pollutant Discharge Elimination System Permit – Update current Heskett Station General Industrial Stormwater Permit NDR05-0000 – NDDEQ
- National Pollutant Discharge Elimination System Permit (ND0000264) – Advance notice indicating planned changes – NDDEQ
- Overweight-Overheight Permit – North Dakota Highway Patrol
- Prevention of Significant Deterioration Permit to Construct (Air Emissions Permit) – NDDEQ

- Septic System Permit – Custer District Health Unit
- Title V Air Emissions Operating Permit – Update current Heskett Station Title V Air Emissions Operating Permit T5-F76001 – NDDEQ

12. Qualifications of Contributors to Siting Study

Abbie Krebsbach

Abbie was awarded a BS in Chemical Engineering from the University of North Dakota, Grand Forks, North Dakota. She is the Environmental Manager at Montana-Dakota. Abbie has 16 years of experience at Montana-Dakota in waste disposal, water discharge, air emissions, and natural resources environmental permitting, compliance, auditing, and training. She also worked as an Environmental Engineer for the North Dakota Department of Health, Environmental Health Section – Division of Water Quality for two years administering industrial and municipal facility National Pollutant Discharge Elimination System program wastewater discharge permits and conducting compliance inspections.

Alan Welte

Alan holds a BS degree in Mechanical Engineering from the North Dakota State University, Fargo, North Dakota. He has 37 years of experience in a variety of electric generation positions including 9 years in engineering, 12 years as a Station Manager, and 16 years in his current position of Generation Manager where he has overall responsibility for Montana-Dakota's electric generation facilities. Alan has been involved in power plant operation and maintenance, plant performance, project design and management, and new generation resource planning and development.

Ashley Ross

Ashley is an environmental planner with KLJ that holds a BS in Natural Resources Management from Dickinson State University, Dickinson, North Dakota. She has 10 years of experience in conservation and environmental planning, which has allowed her to work in coordination with private landowners and entities, local, state, federal, and tribal agencies. Ashley has experience in completing impact assessments, public and agency coordination, permitting, and biological and botanical surveys. She has authored numerous technical reports including National Environmental Policy Act (NEPA) documents such as Environmental Assessments, Categorical Exclusions, and Environmental Impact Statements. Ashley has extensive experience with the renewable and non-renewable energy fields.

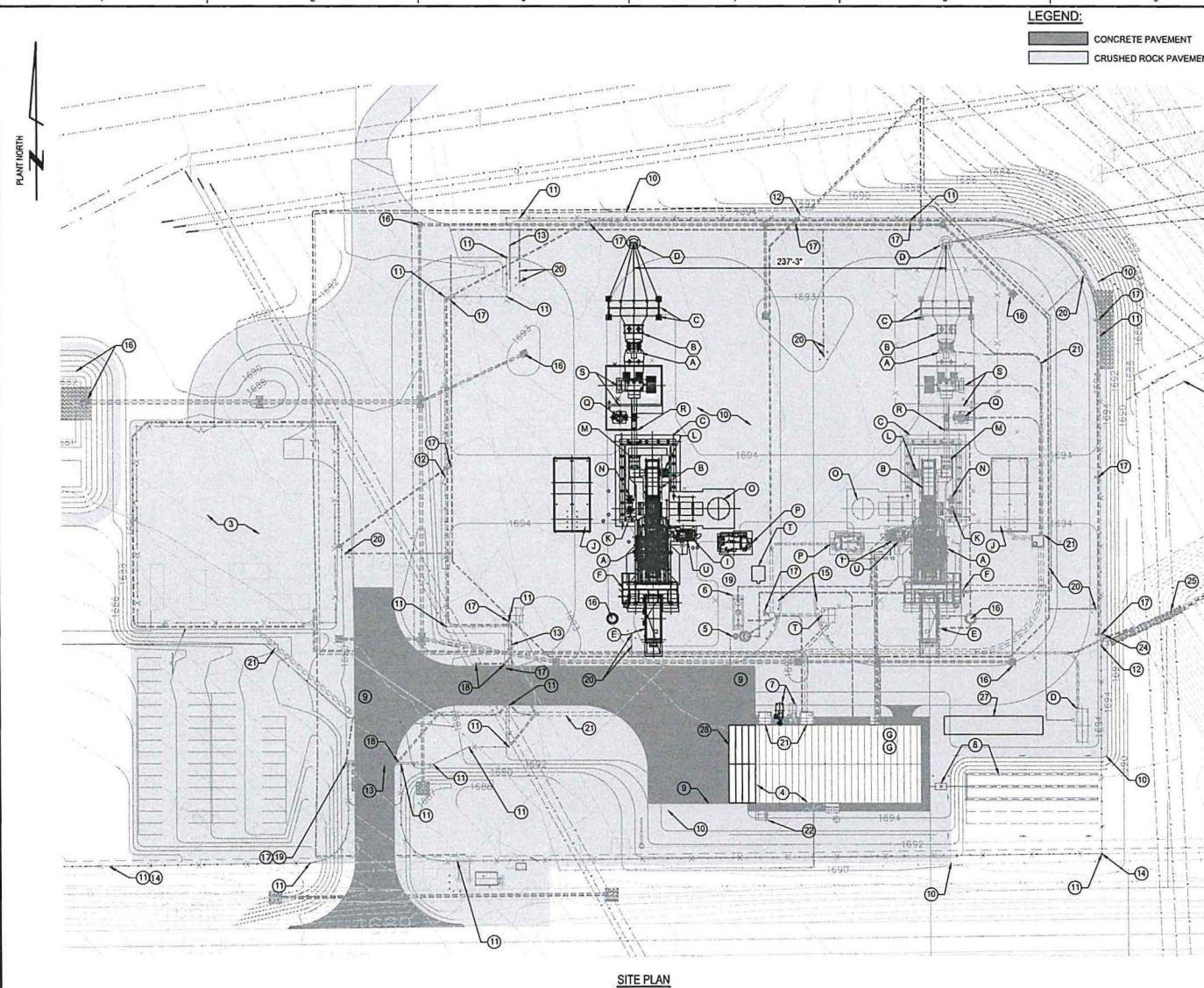
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Appendix A: Figures

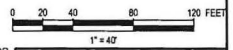
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- LEGEND:**
- CONCRETE PAVEMENT
 - CRUSHED ROCK PAVEMENT

- KEYNOTES:**
- 1 CT (COMBUSTION TURBINE) GROUP
 - A CT
 - B GENERATOR
 - C GENERATOR ROTOR REMOVAL
 - D WATER WASH SKID
 - E PECC (PACKAGED ELECTRICAL AND ELECTRONIC CONTROL COMPARTMENT)
 - F INLET AIR FILTER AND EVAPORATIVE COOLING MODULE
 - G WMFP (WATER MIST FIRE PROTECTION) SKID (INSIDE SERVICE BUILDING)
 - H NOT USED
 - I CT FUEL GAS VALVE MODULE
 - J CLOSED COOLING WATER MODULE
 - K CT EXHAUST FRAME BLOWERS
 - L GNAC (GENERATOR NEUTRAL ACCESSORY COMPARTMENT)
 - M GCBC (GENERATOR CIRCUIT BREAKER COMPARTMENT)
 - N ACOUSTIC BARRIER WALL
 - O EXHAUST SYSTEM AND ACOUSTIC PACKAGE-(CONTRACT 140089)
 - P CEMS (CONTINUOUS EMISSION MONITORING SYSTEM) BUILDING-(CONTRACT 140093)
 - Q UAT (UNIT AUX. TRANSFORMER)-(CONTRACT 140088)
 - R NON-SEG BUS & BUS SUPPORT STANDS-(CONTRACT 140092)
 - S GSU (GENERATOR STEP-UP) TRANSFORMER AND FIREWALL-(CONTRACT 140087)
 - T FINAL GAS COALESCING FILTER SKID-(CONTRACT 140090)
 - U OIL MIST ELIMINATOR
 - 2 SWITCHYARD KEYNOTES
 - A 115-KV CIRCUIT BREAKER
 - B 115-KV DISCONNECT SWITCH
 - C A-FRAME AND 115-KV METERING EQUIPMENT
 - D TRANSMISSION POLE
 - 3 FUEL GAS YARD FOUNDATION, GROUNDING, FENCE, GATE, ROCK, AND EQUIPMENT.
 - 4 SERVICE BUILDING FOUNDATIONS AND METAL BUILDING, REF. SERVICE BUILDING DRAWINGS.
 - 5 WASTEWATER LIFT STATION AND FORCE MAIN.
 - 6 UNDERGROUND EMERGENCY OILY DRAIN TANK.
 - 7 STATION SERVICE TRANSFORMER (CONTRACT 140092).
 - 8 ONSITE WASTEWATER TREATMENT SYSTEM.
 - 9 CONCRETE PAVEMENT, REF. PAVEMENT PLAN AND DETAILS. INSTALLED AS PART OF CN140096.
 - 10 CRUSHED ROCK SURFACING, 5' MINIMUM OUTSIDE PAVEMENT, REF. PAVEMENT PLAN AND DETAILS.
 - 11 SITE SECURITY FENCE, REF. FENCE DETAILS. EXTEND FENCE WEST ALONG 38TH STREET TO PROPERTY CORNER.
 - 12 SITE SECURITY MAN GATE, 3 PLACES, REF. FENCE DETAILS.
 - 13 SITE SECURITY CANTILEVER SLIDE GATE, 3 PLACES, REF. SITE DETAILS. INSTALLED AS PART OF CN140096.
 - 14 FENCE ISOLATION REFERENCE FENCE DETAILS.
 - 15 GUARDRAIL BARRIER, 6 PLACES, REF. SITE DETAILS.
 - 16 STORMWATER MANAGEMENT SYSTEM.
 - 17 SITE LIGHTING (12 PLACES), REFERENCE LIGHTING DETAILS.
 - 18 GATE OPERATOR, AND GATE ACTUATOR. INSTALLED AS PART OF CN140096.
 - 19 CLOSED CIRCUIT CAMERA, REF. SPECIFICATIONS (BY OTHERS).
 - 20 SITE FIRE PROTECTION SYSTEM, REFERENCE MECHANICAL PLANS AND DETAILS.
 - 21 ELECTRICAL MANHOLES AND DUCTBANK, REFERENCE ELECTRICAL PLANS AND DETAILS.
 - 22 CONSTRUCTION POWER SUPPLY (SERVICE BUILDING ALTERNATE SUPPLY) TRANSFORMER. CONCRETE PAD FOR OWNER SUPPLIED AND INSTALLED ALTERNATE SUPPLY PAD MOUNT TRANSFORMER.
 - 23 MANHOLES FOR MECHANICAL PIPING SERVICES, REFERENCE UNDERGROUND DRAWINGS.
 - 24 KEY CARD READER.
 - 25 STAIRCASE
 - 26 SIDEWALK
 - 27 EMERGENCY GENERATOR
 - 28 20' BUILDING EXTENSION

SITE PLAN
SCALE: 1" = 40'



PRELIMINARY,
NOT FOR CONSTRUCTION,
RECORDING PURPOSES,
OR IMPLEMENTATION

PROJECT LOCATION:
2025 38TH ST
MANDAN, MORTON CO., NORTH DAKOTA 58554

EX-C1-A.DWG

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INTER-DISCIPLINE REVIEW															
DISC	ARCH	CIVIL	ELECT	ISC	MECH	STRUCT	D	C	B						
INIT	*	*	*	*	*	*	ISSUED WITH FINAL STUDY REPORT	09/04/19	BLW	BHR	SMT	CMD	DRN	BRG	06/17/19
							ISSUED WITH SCCT STUDY	08/12/19	NLI	BHR	SMT	CMD	CKD	SMT	09/04/19
							ISSUED WITH SCCT STUDY	07/19/19	NLI	BHR	SMT	CMD			
							ISSUED WITH SCCT STUDY	06/17/19	BLW	BHR	SMT	CMD			
REV	DATE	DRN	DSGN	CKD	APPD	FOR 2D/3D DWG ONLY									

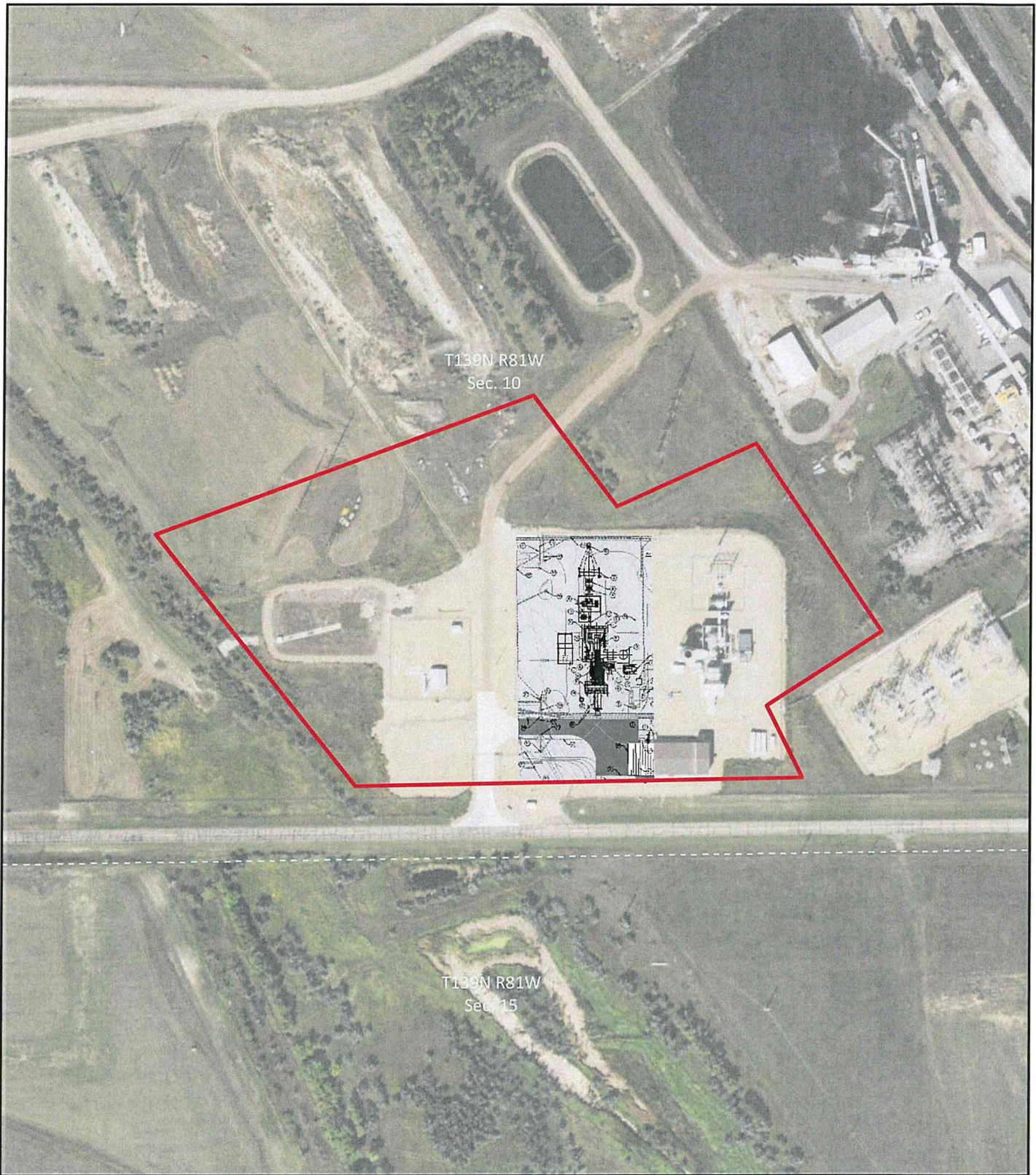
SCALE: 1" = 40'

FOR 2D/3D DWG ONLY


MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

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MONTANA-DAKOTA UTILITIES CO. HESKETT UNIT 4	157810	
OVERALL SITE PLAN	DRAWING NUMBER	
	EXH-C1-1A	



**Figure 2 - Facility Layout
Montana-Dakota Utilities Co.
Morton County, ND**

 Study Area

Imagery Source: ©2018, USDA-FSA-APFO

KLJ Project Number: 1909-01604
Date Created: 10/1/2019
Created By: jeffprice

