



Serial No. RA-19-001  
MPS NSSL/GJC R0

Melanie A. Bachman  
Acting Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Ct. 06051

**MAR 05 2019**

**Re: Dominion Energy Nuclear Connecticut, Inc. – Notice of Exempt  
Modification Millstone Power Station – Installation of New Diesel Generator  
for Radio and Telephone Reliability**

Dear Ms. Bachman:

As you are aware, Dominion Energy Nuclear Connecticut, Inc (DENC) owns and operates the Millstone Power Station (MPS) in Waterford, Connecticut. In an effort to improve overall station reliability, DENC plans to purchase a new 60 KW diesel-fueled generator to provide back-up power to the MPS radio and telephone systems. The diesel generator will be located on a 5-foot wide by 12-foot long by 6-foot 4-inch high concrete equipment pad to the south of the Administration Building (see MPS Facilities Site Plan included in Attachment 1 and the MPS New Trunked Radio TRSEC – Generator Location Plan included in Attachment 2). Specifications and design drawings for the new 60 KW diesel generator are included in Attachment 3.

Please accept this letter as notification pursuant to R.C.S.A. §16-50j-58, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-57(b)(2). In accordance with R.C.S.A. §16-50j-58 a copy of this letter is being sent to Daniel M. Steward, First Selectman for the Town of Waterford and Abby Piersall, Waterford's Planning Director.

The planned facility modification at MPS described above does not constitute a modification to an existing energy facility that may have a substantial adverse environment effect as defined in R.C.S.A. §16-50j-57(b)(2).

1. The new diesel generator adjacent to the Administration Building will not require an extension or expansion of the MPS fenced boundaries.
2. The installation of the new diesel generator will not result in an increase in the height of any associated equipment or buildings at MPS.
3. The installation of the new diesel generator will not result in an increase in the noise at the MPS site boundary by 6 decibels or more, or to levels that exceed state or local criteria.
4. The installation of the new diesel generator will not cause an increase in the electric or magnetic field levels at the MPS boundary.

5. The installation of new 5-foot wide by 12-foot long by 6-foot 4-inch high concrete pad and the new diesel generator will not cause any significant or adverse change or alteration in the physical or environmental characteristics at the MPS site.
6. The installation of the new diesel generator will not impact the structural integrity of any buildings or structures at the MPS site.

For these reasons, DENC respectively submits that the modifications described above to MPS constitute an exempt modification under R.C.S.A. 16-50j-57(b)(2).

A check in the amount of \$625.00 is enclosed.

Sincerely,



Lori J. Armstrong  
Director, Nuclear Station Safety and Licensing

Attachments:

1. MPS Facilities Site Plan
2. New Trunked Radio TRSEC – Generator Location Plan
3. Diesel Generator Specifications and Design Drawings
4. Check for Filing Fee

CC:

Dan Steward, First Selectman, Town of Waterford  
William S. Blair, Esq.  
Abby Piersall, Planning Director, Town of Waterford  
Brian McKercher  
Thomas Bransfield

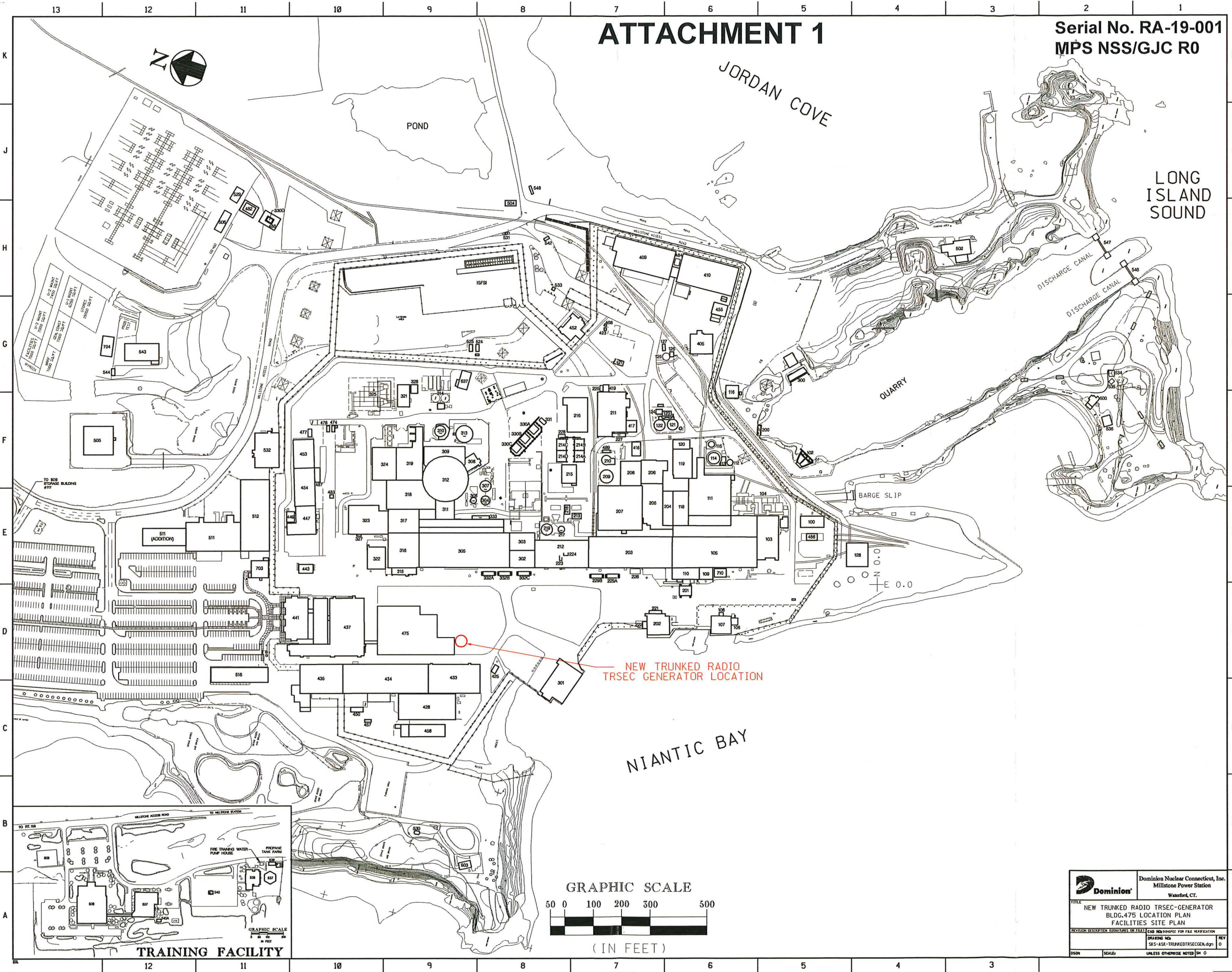
**ATTACHMENT 1**

**MILLSTONE POWER STATION SITE PLAN**

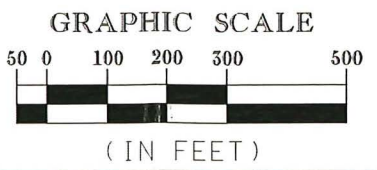
**MILLSTONE POWER STATION  
DOMINION ENERGY NUCLEAR CONNECTICUT, INC. (DENC)**

# ATTACHMENT 1

Serial No. RA-19-001  
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NEW TRUNKED RADIO  
TRSEC GENERATOR LOCATION



	Dominion Nuclear Connecticut, Inc. Millstone Power Station Waterford, CT.
TITLE NEW TRUNKED RADIO TRSEC-GENERATOR BLDG.475 LOCATION PLAN FACILITIES SITE PLAN	
REVISION DESCRIPTION, DATE/TIME OR FILE NO. FOR FILE NAVIGATION	DATE
DRAWING NO. SKS-ASA-TRUNKEDTRSECEN.dgn	REV 0
DSOH	SCALE UNLESS OTHERWISE NOTED 1/8" = 1'-0"

TRAINING FACILITY

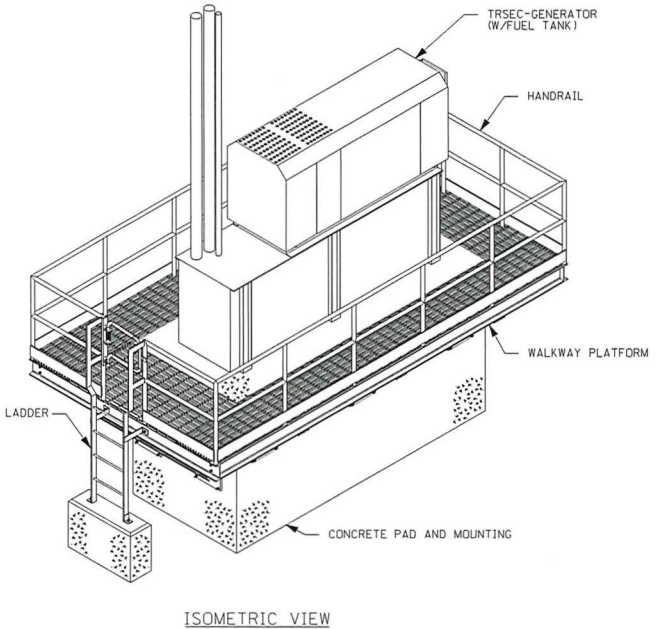
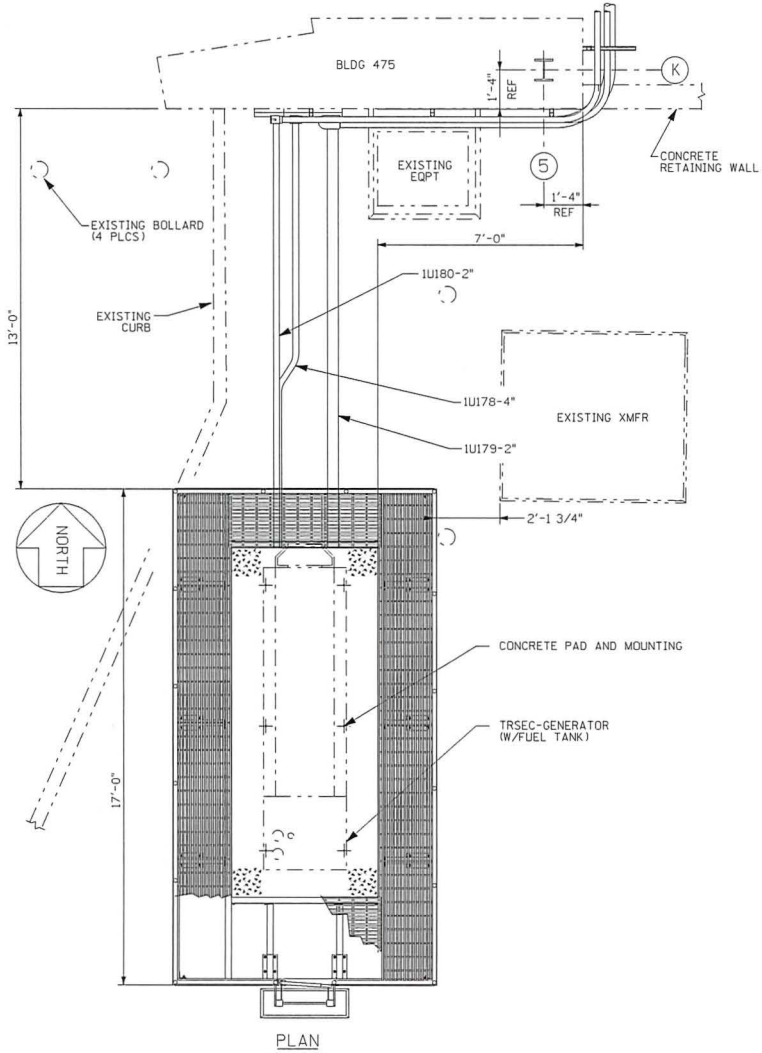
**ATTACHMENT 2**

**NEW TRUNKED RADIO TRSEC – GENERATOR LOCATION PLAN**

**MILLSTONE POWER STATION  
DOMINION ENERGY NUCLEAR CONNECTICUT, INC. (DENC)**

# ATTACHMENT 2

Serial No. RA-19-001  
MPS NSS/GJC R0



DOMINION NUCLEAR CONNECTICUT  
MILLSTONE POWER STATION  
NEW TRUNKED RADIO TRSEC-GENERATOR  
LOCATION PLAN

5/15/19-TRUNKEDTRSEC.dwg

Serial No. RA-19-001  
MPS NSSL/GJC R0

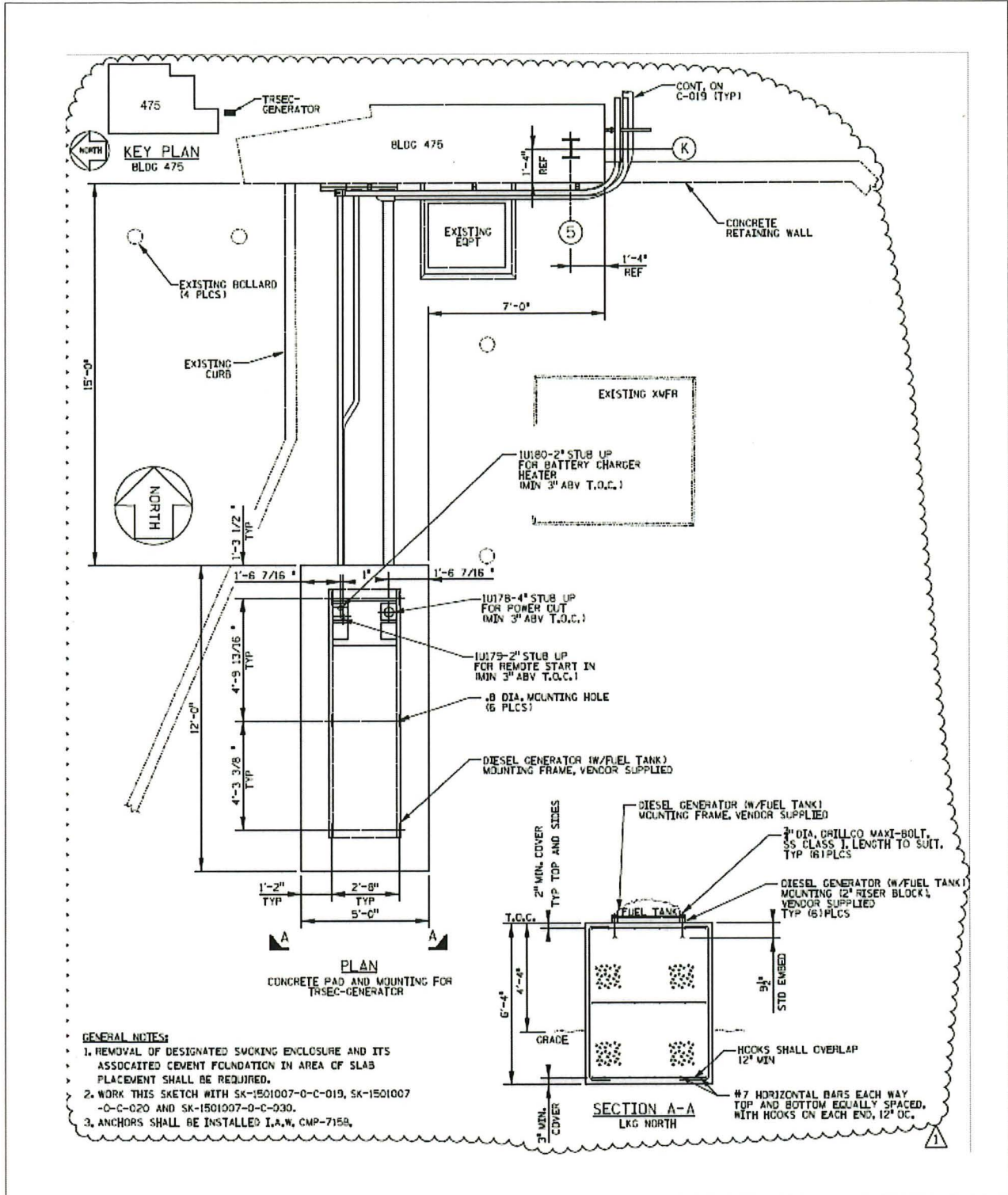
## **ATTACHMENT 3**

### **DIESEL GENERATOR SPECIFICATIONS AND DESIGN DRAWINGS**

**MILLSTONE POWER STATION  
DOMINION ENERGY NUCLEAR CONNECTICUT, INC. (DENC)**

# ATTACHMENT 3

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**GENERAL NOTES:**

1. REMOVAL OF DESIGNATED SMOKING ENCLOSURE AND ITS ASSOCIATED CEMENT FOUNDATION IN AREA OF SLAB PLACEMENT SHALL BE REQUIRED.
2. WORK THIS SKETCH WITH SK-1501007-0-C-019, SK-1501007-0-C-020 AND SK-1501007-0-C-030.
3. ANCHORS SHALL BE INSTALLED I.A.W. CMP-7158.



## Specification sheet

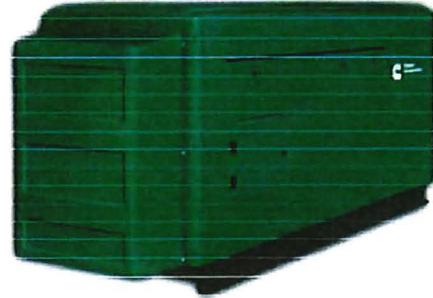


# Diesel generator set

50 kW - 60 kW

EPA emissions

stationary Standby



### Description

Cummins® generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary Standby applications.

### Features

**Cummins heavy-duty engine** - Rugged 4-cycle, liquid-cooled, industrial diesel engine delivers reliable power, low emissions and fast response to load changes.

**Alternator** - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

**Control system** - The PowerCommand® 1.1 electronic control is standard equipment and provides total generator set system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

**Cooling system** - Standard cooling package provides reliable running at up to 50 °C (122 °F) ambient temperature.

**Enclosures** - The aesthetically appealing enclosure incorporates special designs that deliver one of the quietest generators of its kind. Aluminum material plus durable powder coat paint provides the best anti-corrosion performance. The generator set enclosure has been evaluated to withstand 180 MPH wind loads in accordance with ASCE7-10. The intelligent design has removable panels and service doors to provide easy access for service and maintenance.

**Fuel tanks** - Two dual wall sub-base fuel tank series are offered as optional features, providing economical and flexible solutions to meet extensive code requirements on diesel fuel tanks.

**NFPA** - The generator set accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

**Warranty and service** - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby rating 60 Hz		Prime rating 60 Hz		Data sheets 60 Hz
	kW	kVA	kW	kVA	
C50 D6	50.0	62.5	45.0	56.25	NAD-5863
* C60 D6	60.0	75.0	54.0	67.50	NAD-5864

P. 2

## Generator set specifications

Governor regulation class	TBC
Voltage regulation, no load to full load	± 1.0%
Random voltage variation	± 1.0%
Frequency regulation	Isochronous
Random frequency variation	TBD
Radio frequency emissions compliance	FCC code Title 47 Part 15 Class B

## Engine specifications

Design	Turbocharged and charge air-cooled
Bore	95.0 mm (3.74 in.)
Stroke	115.0 mm (4.53 in.)
Displacement	3.26 litres (199 in <sup>3</sup> )
Cylinder block	Cast iron, in-line, 4 cylinder
Battery capacity	550 amps at ambient temperature of 0 °F to 32 °F (-18 °C to 0 °C)
Battery charging alternator	50 amps
Starting voltage	12 volt, negative ground
Fuel system	Direct injection, number 2 diesel fuel, fuel filter, electric fuel shut off
Fuel filter	Single element, 10 micron filtration, spin-on fuel filter with water separator
Air cleaner type	Dry replaceable element
Lube oil filter type(s)	Spin-on, full flow
Standard cooling system	50 °C (122 °F) ambient cooling system
Rated speed	1800 rpm

## Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	2/3 pitch
Rotor	Direct coupled, flexible disc
Insulation system	Class H per NEMA MG1-1.65
Standard temperature rise	120 °C (248 °F) Standby
Exciter type	Torque match (shunt) with PMG as option
Alternator cooling	Direct drive centrifugal blower
AC waveform Total Harmonic Distortion (THDV)	< 5% no load to full linear load, < 3% for any single harmonic
Telephone Influence Factor (TIF)	< 50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	3%

## Available voltages

Single phase	3 phase
• 120/240	• 120/208 • 120/240 delta • 277/480 • 347/600

Note: Consult factory for other voltages.

## Generator set options

### Fuel system

- Basic fuel tanks
- Regional fuel tanks

### Engine

- Engine air cleaner – normal or heavy duty
- Shut down – low oil pressure
- Extension – oil drain
- 120 V 1000 W coolant heater

### Alternator

- One size up alternator
- PMG
- Alternator heater, 120 V

### Control

- AC output analog meters (bargraph)
- Stop switch – emergency
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)

### Electrical

- Single circuit breaker
- Dual circuit breakers

### Enclosure

- Aluminum enclosure sound level 1 or level 2, with muffler installed, sandstone or green color
- Open set

### Cooling system

- Shutdown – low coolant level
- Warning – low coolant level
- Extension – coolant drain
- Coolant heater – 120 V, 1 Ph

### Exhaust system

- Exhaust connector - NPT

### Generator set application

- Battery rack
- Battery rack, heavy duty

**= Included**

## Generator set options (continued)

### Warranty

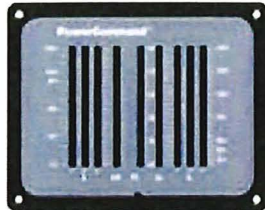
- Base warranty – 2 year, 1000 hour, Standby
- Standby, 3 year, 1500 hour, parts
- Standby, 5 year, 2500 hour, parts
- Standby, 3 year, 1500 hour, parts and labor
- Standby, 5 year, 2500 hour, parts and labor
- Standby, 3 year, 1500 hour, parts and labor

Note: Some options may not be available on all models - consult factory for availability.

## Generator set accessories

- Coolant heater
- Extreme cold weather components
- HMI211RS in-home display, including pre-configured 12" harness
- HMI211 remote display, including pre-configured 12" harness
- HMI220 remote display
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)
- Annunciator – RS485
- Remote monitoring device – PowerCommand 500
- Battery charger – stand-alone, 12 V
- Circuit breakers
- Enclosure Sound Level 1 to Sound Level 2 upgrade kit
- Enclosure paint touch up kit
- Mufflers – industrial, residential or critical
- Alternator PMG
- Alternator heater
- Maintenance and service kit
- Engine lift kit
- Various fuel tanks and accessories

## Control system PowerCommand 1.1



PowerCommand control is an integrated generator set control system providing voltage regulation, engine protection, operator interface and isochronous governing (optional). Major features include:

- Battery monitoring and testing features and smart starting control system.
- Standard PCCNet interface to devices such as remote annunciator for NFPA 110 applications.
- Control boards potted for environmental protection.
- Control suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F) and altitudes to 5000 meters (13,000 feet).
- Prototype tested; UL, CSA, and CE compliant.
- InPower™ PC-based service tool available for detailed diagnostics.

### Operator/display panel

- Manual off switch
- Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols)
- LED lamps indicating generator set running, not in auto, common warning, common shutdown, manual run mode and remote start
- Suitable for operation in ambient temperatures from -40 °C to +70 °C
- Bargraph display (optional)

### AC protection

- Over current warning and shutdown
- Over and under voltage shutdown
- Over and under frequency shutdown
- Over excitation (loss of sensing) fault
- Field overload

### Engine protection

- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- High, low and weak battery voltage warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown

### Alternator data

- Line-to-Line and Line-to-Neutral AC volts
- 3-phase AC current
- Frequency

### Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Engine speed

### Other data

- Generator set model data
- Start attempts, starts, running hours
- Fault history
- RS485 Modbus<sup>®</sup> interface
- Data logging and fault simulation (requires InPower service tool)

### Digital governing (optional)

- Integrated digital electronic isochronous governor
- Temperature dynamic governing

### Digital voltage regulation

- Integrated digital electronic voltage regulator
- 2-phase Line-to-Line sensing
- Configurable torque matching

### Control functions

- Time delay start and cooldown
- Cycle cranking
- PCCNet interface
- (2) Configurable inputs
- (2) Configurable outputs
- Remote emergency stop
- Automatic Transfer Switch (ATS) control
- Generator set exercise, field adjustable

### Options

- Auxiliary output relays (2)
- Remote annunciator with (3) configurable inputs and (4) configurable outputs
- PMG alternator excitation
- PowerCommand 500/550 for remote monitoring and alarm notification (accessory)
- Auxiliary, configurable signal inputs (8) and configurable relay outputs (8)
- Digital governing
- AC output analog meters (bargraph)
  - Color-coded graphical display of:
    - 3-phase AC voltage
    - 3-phase current
    - Frequency
    - kVa
- Remote operator panel

## Ratings definitions

### Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Limited-Time Running Power (LTP):

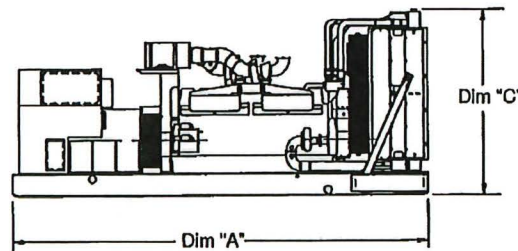
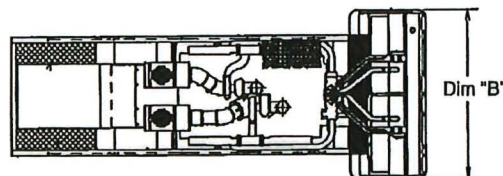
Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

### Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Base Load (Continuous) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

Do not use for installation design

**ATTACHMENT 4**

**CHECK FOR FILING FEE**

**MILLSTONE POWER STATION  
DOMINION ENERGY NUCLEAR CONNECTICUT, INC. (DENC)**