Clinton Power Station
8401 Power Road
Clinton, IL 61727

U-604831

10 CFR 50.36a

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Clinton Power Station 2024 Annual Radioactive Effluent Release Report

Clinton Power Station is submitting the 2024 Annual Radioactive Effluent Release Report. This report is submitted in accordance with Technical Specification requirement 5.6.3, "Radioactive Effluent Release Report," and covers the period from January 1, 2024, through December 31, 2024.

There are no regulatory commitments contained in this report.

Questions in regard to this letter may be directed to Mr. Mohamad Fakhreddine, Chemistry Manager, at 217-937-3200.

Respectfully,

Krukowski, Andrew

Digitally signed by Krukowski, Andrew
Date: 2025.04.29 06:57:53 -05'00'

Andrew Krukowski
Plant Manager
Clinton Power Station

IE48

NRR

Attachment: Radioactive Effluent Release Report

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Office of Nuclear Facility Safety – Illinois Emergency Management Agency

U-604831

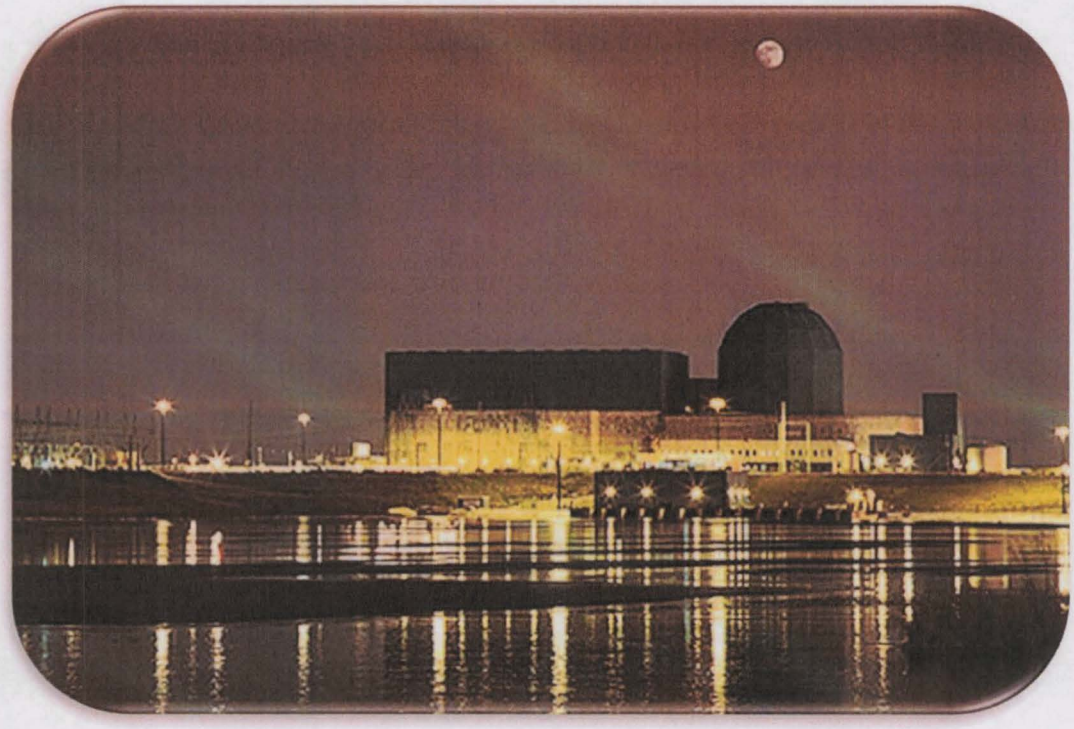
SUBJECT: Clinton Power Station 2024 Annual Radioactive Effluent Release Report

bcc (with attachment):

N. Plumey
C. Wilson
D. Hillinger
C. Miller
R. Johnston
M. Fakhreddine
D. Livingston

Constellation

Clinton Clean Energy Center



2024

Annual Radioactive Effluent Release Report

Docket Number: 50-461

TABLE OF CONTENTS

TABLES

TABLE OF CONTENTS

FIGURES

ATTACHMENTS

1.0 LIST OF ACRONYMS AND DEFINITIONS

1. Alpha Particle (α): A charged particle emitted from the nucleus of an atom having a mass and charge equal in magnitude of a helium nucleus.
2. BWR: Boiling Water Reactor
3. Composite Sample: A series of single collected portions (aliquots) analyzed as one sample. The aliquots making up the sample are collected at time intervals that are very short compared to the composite period.
4. Control: A sampling station in a location not likely to be affected by plant effluents due to its distance and/or direction from the Plant.
5. Counting Error: An estimate of the two-sigma uncertainty associated with the sample results based on total counts accumulated.
6. Curie (Ci): A measure of radioactivity; equal to 3.7×10^{10} disintegrations per second, or 2.22×10^{12} disintegrations per minute.
7. Direct Radiation Monitoring: The measurement of radiation dose at various distances from the plant is assessed using thermoluminescent dosimeters (TLDs), optically stimulated luminescent dosimeters (OSLDs), and/or pressurized ionization chambers.
8. Grab Sample: A single discrete sample drawn at one point in time.
9. Indicator: A sampling location that is potentially affected by plant effluents due to its proximity and/or direction from the plant.
10. Ingestion Pathway: The ingestion pathway includes milk, fish, drinking water and garden produce. Also sampled (under special circumstances) are other media such as vegetation or animal products when additional information about particular radionuclides is needed.
11. ISFSI: Independent Spent Fuel Storage Installation
12. LLD: Lower Limit of Detection. An *a priori* measure of the detection capability of a radiochemistry measurement based on instrument setup, calibration, background, decay time, and sample volume. An LLD is expressed as an activity concentration. The MDA is used for reporting results. LLD are specified by a regulator, such as the NRC and are typically listed in the ODCM.
13. MDA: Minimum Detectable Activity. For radiochemistry instruments, the MDA is the *a posteriori* minimum concentration that a counting system detects. The smallest concentration or activity of radioactive material in a sample that will yield a net count above instrument background and that is detected with 95% probability, with only 5% probability of falsely concluding that a blank observation represents a true signal.
14. MDC: Minimum Detectable Concentration. Essentially synonymous with MDA for the purposes of radiological monitoring.
15. Mean: The sum of all of the values in a distribution divided by the number of values in the distribution, synonymous with average.

16. Microcurie (µCi): 3.7 x 10^4 disintegrations per second, or 2.22 x10^6 disintegrations per minute.
17. millirem (mrem): 1/1000 rem; a unit of radiation dose equivalent in tissue.
18. Milliroentgen (mR): 1/1000 Roentgen; a unit of exposure to X- or gamma radiation.
19. N/A: Not Applicable
20. NEI: Nuclear Energy Institute
21. NRC: Nuclear Regulatory Commission
22. ODCM: Offsite Dose Calculation Manual
23. OSLD: Optically Stimulated Luminescence Dosimeter
24. Protected Area: A 10 CFR 73 security term is an area encompassed by physical barriers and to which access is controlled for security purposes. The fenced area immediately surrounding the plant and around ISFSI are commonly classified by the licensee as "Protected areas." Access to the protected area requires a security badge or escort.
25. PWR: Pressurized Water Reactor
26. REC: Radiological Effluent Control
27. REMP: Radiological Environmental Monitoring Program
28. Restricted Area: A 10 CFRR 20 defined term where access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.
29. TEDE: Total Effective Dose Equivalent (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).
30. TLD: Thermoluminescent Dosimeter
31. TRM: Technical Requirements Manual
32. TS: Technical Specification
33. Unrestricted Area: An area, access to which is neither limited nor controlled by the licensee.

2.0 Executive Summary

Clinton Clean Energy Center (CCEC) Radiological Effluent Control (REC) Program was established to limit the quantities of radioactive material that may be released based on calculated radiation doses or dose rates. Dose to Members of the Public due to radioactive materials released from the plant is limited by Technical Specifications,10 CFR 20, and by 40 CFR 190. Operational doses to the public during 2024 were calculated to be within the limits required by regulation and compared to other sources of radiation dose and pose no health hazard. These doses are summarized and compared to the regulatory limits in Section 2.1 Comparison to Regulatory Limits below.

The Annual Radioactive Effluent Release Report (ARERR) is published per REC requirements and provides data related to plant operation, including: quantities of radioactive materials released in liquid and gaseous effluents; radiation doses to members of the public; solid radioactive waste shipped offsite for processing or direct disposal; and other information as required by site licensing documents.

In 2024, the gaseous effluent dose assessments for locations from the Land Use Census showed that the critical receptor for Clinton Clean Energy Center is Adult, dose is due to Non Noble Gas effluents, at 1500 meters North. The maximum Annual Organ Dose calculated for this receptor was 2.32 E-02 mRem, to the Bone.

The maximum dose calculated to any organ due to radioactive liquid effluents was 0.00E+00, for all age groups, all organs, due to all pathways. CCEC had zero liquid effluent releases in 2024.

Solid radioactive waste shipped offsite for processing or direct disposal included 1.17E+02 Curies and 2.83E+02 m^3, shipped in 17 shipments.

In addition to monitoring radioactive effluents, CCEC has a Radiological Environmental Monitoring Program (REMP) that monitors for levels of radiation and radioactive materials in the local environment. Data from the REMP is published in the Annual Radiological Environmental Operating Report (AREOR).

2.1 Comparison to Regulatory Limits

During 2024 all solid, liquid, and gaseous radioactive effluents from Clinton Clean Energy Center were well below regulatory limits, as summarized in Table 1 and Table 2.

Table 1, Clinton Clean Energy Center Dose Summary[1]

		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
Liquid Effluent Dose Limit, Total Body	Limit	1.5 mrem	1.5 mrem	1.5 mrem	1.5 mrem	3 mrem
	Total Body Dose	0	0	0	0	0
	% of Limit	0	0	0	0	0
Liquid Effluent Dose Limit, Any Organ	Limit	5 mrem	5 mrem	5 mrem	5 mrem	10 mrem
	Max Organ Dose	0	0	0	0	0
	% of Limit	0	0	0	0	0
Gaseous Effluent Dose Limit, Gamma Air (Noble Gas)	Limit	5 mrad	5 mrad	5 mrad	5 mrad	10 mrad
	Gamma Air Dose	8.64E-05	1.82E-04	4.28E-04	3.97E-04	1.09E-03
	% of Limit	1.73E-03	3.64E-03	8.56E-03	7.94E-03	1.09E-02
Gaseous Effluent Dose Limit, Beta Air (Noble Gas)	Limit	10 mrad	10 mrad	10 mrad	10 mrad	20 mrad
	Beta Air Dose	4.42E-05	9.29E-05	2.18E-04	2.03E-04	5.59E-04
	% of Limit	4.42E-04	9.29E-04	2.18E-03	2.03E-03	2.80E-03
Gaseous Effluent Organ Dose Limit (Iodine, Tritium, Particulates with > 8-day half-life)	Limit	7.5 mrem	7.5 mrem	7.5 mrem	7.5 mrem	15 mrem
	Max Organ Dose	5.73E-03	5.75E-03	5.80E-03	5.80E-03	2.32E-02
	% of Limit	7.64E-02	7.67E-02	7.73E-02	7.73E-02	1.55-01

[1] Table 1 demonstrates compliance with 10 CFR Part 50, App. I Limits.

Table 2, Total Annual Offsite-Dose Comparison to 40 CFR 190 Limits for CCEC[1]

	Whole Body	**Thyroid**	**Max Other Organ**
Gaseous[2]	2.20E-04	2.12E-04	9.84E-05
Carbon-14	4.60E-03	4.60E-03	2.32E-02
Liquid	0	0	0
Direct Shine	0	0	0
Total Site Dose	4.82E-03	4.81E-03	2.33E-02
Total w/Other Nearby Facility[3]	4.82E-03	4.81E-03	2.33E-02
Limit	**25 mrem**	**75 mrem**	**25 mrem**
% of Limit	1.93E-02	6.41E-03	9.32E-02

[1] Table 2 is a summation of Units to show compliance with 40 CFR Part 190 Limits.
[2] Gaseous dose values in Table 2 include organ dose from Noble Gas, Iodine, Tritium, and particulates.
[3] Other fuel cycle sources within 5 miles of the site are considered in this analysis.

3.0 INTRODUCTION

3.1 About Nuclear Power

Commercial nuclear power plants are generally classified as either Boiling Water Reactors (BWRs) or Pressurized Water Reactors (PWRs), based on their design. A BWR includes a single coolant system where water used as reactor coolant boils as it passes through the core and the steam generated is used to turn the turbine generator for power production. A PWR, in contrast, includes two separate water systems: radioactive reactor coolant and a secondary system. Reactor coolant is maintained under high pressure, preventing boiling. The high-pressure coolant is passed through a heat exchanger called a steam generator where the secondary system water is boiled, and the steam is used to turn the turbine generator for power production.

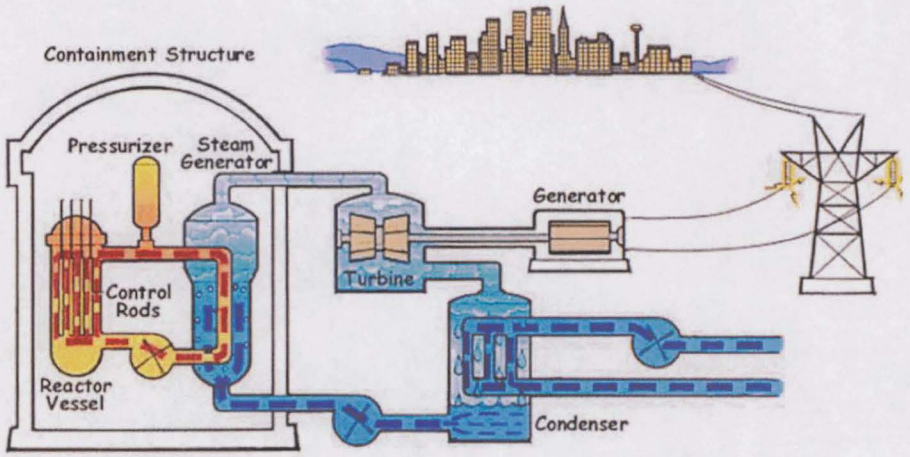


Figure 1, Pressurized Water Reactor (PWR) [1]

3.1 (Continued)

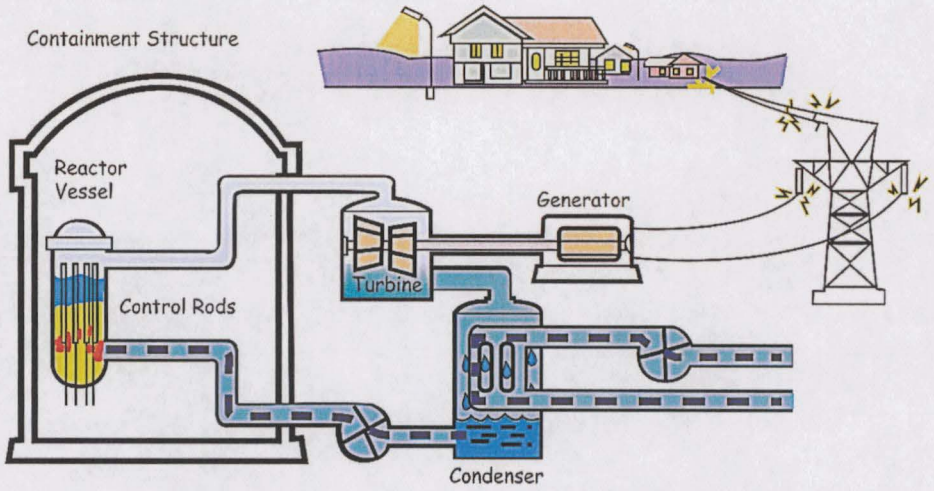


Figure 2, Boiling Water Reactor (BWR) [2]

Electricity is generated by a nuclear power plant similarly to the way that electricity is generated at other conventional types of power plants, such as those powered by coal or natural gas. Water is boiled to generate steam; the steam spins a turbine that is attached to a generator and the steam is condensed back into water to be returned to the boiler. What makes nuclear power different from these other types of power plants is that the heat is generated by fission and decay reactions occurring within and around the core containing fissionable uranium (U-235).

Nuclear fission occurs when certain nuclides (primarily U-233, U-235, or Pu-239) absorb a neutron and break into several smaller nuclides (called fission products) as well as producing some additional neutrons.

Fission results in production of radioactive materials including gases and solids that must be contained to prevent release or treated prior to release. These effluents are generally treated by filtration and/or hold-up prior to release. Releases are generally monitored by sampling and by continuously indicating radiation monitors. The effluent release data is used to calculate doses in order to ensure that dose to the public due to plant operation remains within required limits.

3.2 About Radiation Dose

Ionizing radiation, including alpha, beta, and gamma radiation from radioactive decay, has enough energy to break chemical bonds in tissues and result in damage to tissue or genetic material. The amount of ionization that will be generated by a given exposure to ionizing radiation is quantified as dose. Radiation dose is generally reported in units of millirem (mrem) in the US.

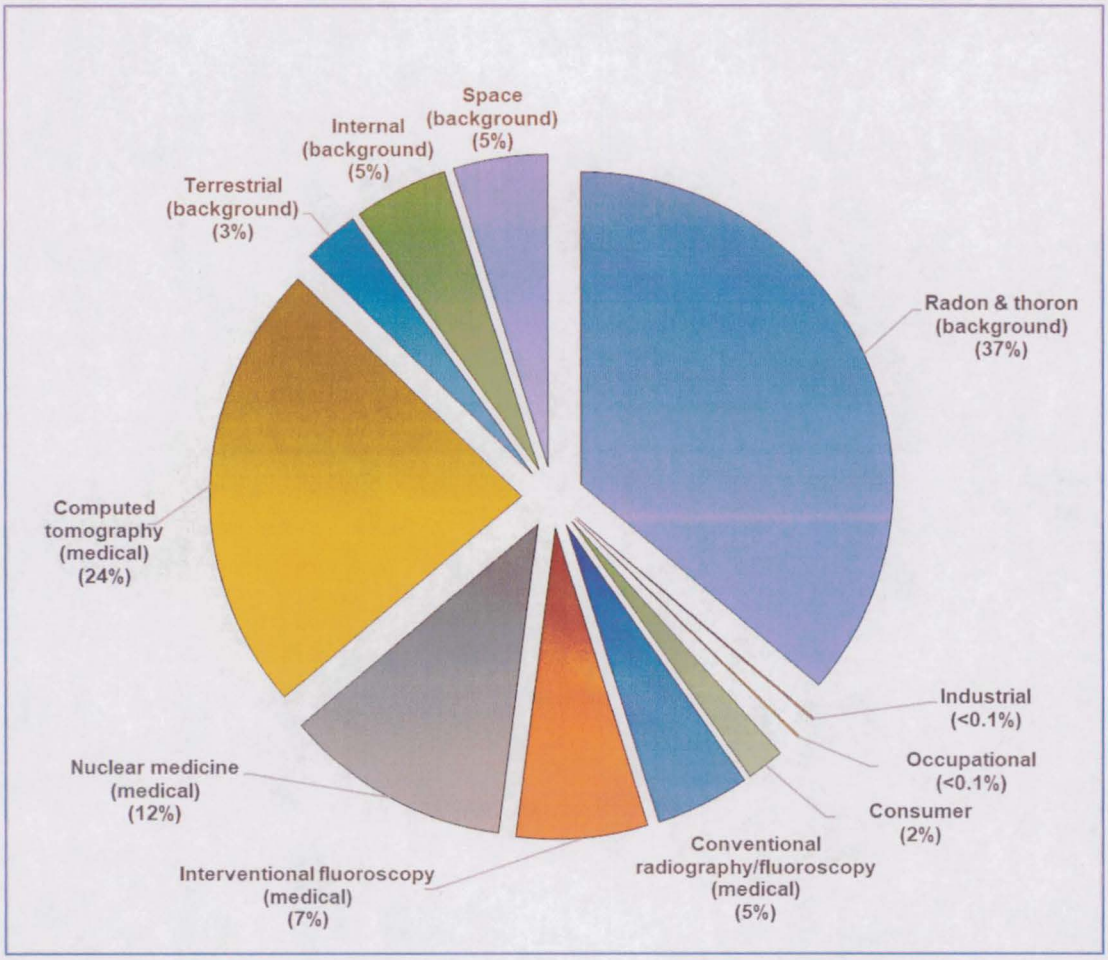


Figure 3, Sources of Radiation Exposure (NCRP Report No. 160) [3]

The National Council on Radiation Protection (NCRP) has evaluated the population dose for the US and determined that the average individual is exposed to approximately 620 mrem per year [3]. There are many sources for radiation dose, ranging from natural background sources to medical procedures, air travel, and industrial processes. Approximately half (310 mrem) of the average exposure is due to natural sources of radiation including exposure to radon, cosmic radiation, and internal radiation and terrestrial due to naturally occurring radionuclides. The remaining 310 mrem of exposure is due to man-made sources of exposure, with the most significant contributors being medical (48% of total mrem per year) due to radiation used in various types of medical scans and treatments. Of the remaining 2% of dose, most is due to consumer activities such as air travel, smoking cigarettes, and building materials. A small fraction of this 2% is due to industrial activities including the generation of nuclear power.

3.2 (Continued)

Readers that are curious about common sources and effects of radiation dose that they may encounter can find excellent sources of information from the Health Physics Society, including the Radiation Fact Sheets [4], and from the US Nuclear Regulatory Commission website [5].

3.3 About Dose Calculation

Concentrations of radioactive material in the environment resulting from plant operations are very small and it is not possible to determine doses directly using measured activities of environmental samples. To overcome this, dose calculations based on measured activities of effluent streams are used to model the dose impact for Members of the Public due to plant operation and effluents. There are several mechanisms that can result in dose to Members of the Public, including: Ingestion of radionuclides in food or water; Inhalation of radionuclides in air; Immersion in a plume of noble gases; and Direct Radiation from the ground, the plant or from an elevated plume.

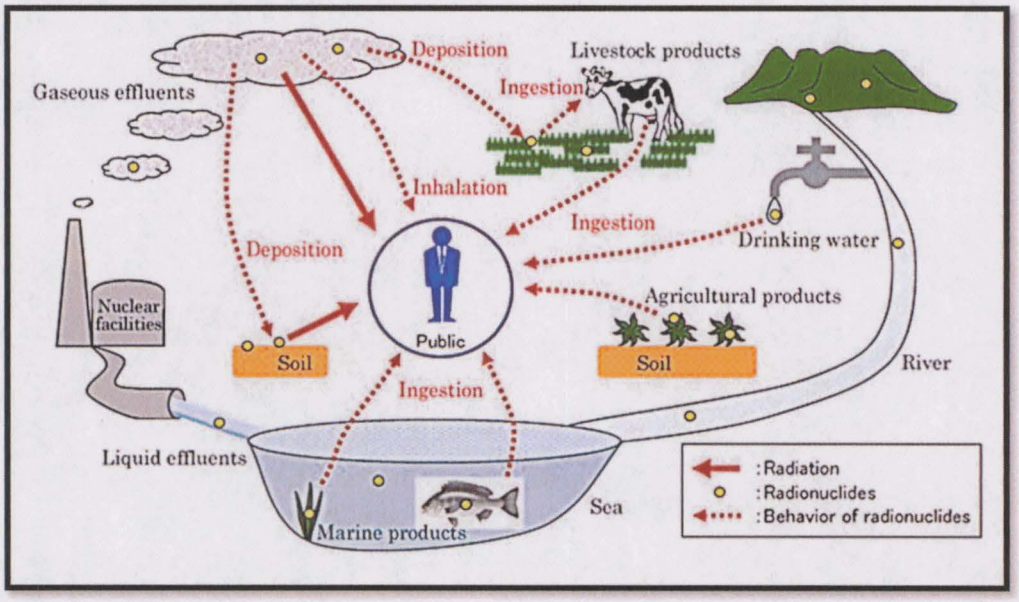


Figure 4, Potential exposure pathways to Members of the Public due to Plant Operations [6]

Each plant has an Offsite Dose Calculation Manual (ODCM) that specifies the methodology used to obtain the doses in the Dose Assessment section of this report. The dose assessment methodology in the ODCM is based on NRC Regulatory Guide 1.109 [7] and NUREG-0133 [8]. Doses are calculated by determining what the nuclide concentration will be in air, water, on the ground, or in food products based on plant effluent releases. Release points are continuously monitored to quantify what concentrations of nuclides are being released. For gaseous releases meteorological data is used to determine how much of the released activity will be present at a given location

3.3 (Continued)

outside of the plant either deposited onto the ground or in gaseous form. Intake patterns and nuclide bio-concentration factors are used to determine how much activity will be transferred into animal milk or meat. Finally, human ingestion factors and dose factors are used to determine how much activity will be consumed and how much dose the consumer will receive. Inhalation dose is calculated by determining the concentration of nuclides and how much air is breathed by the individual.

For liquid releases, dilution and mixing factors are used to model the environmental concentrations in water. Drinking water pathways are modeled by determining the concentration of nuclides in the water at the point where the drinking water is sourced (e.g., taken from wells, rivers, or lakes). Fish and invertebrate pathways are determined by using concentration at the release point, bioaccumulation factors for the fish or invertebrate and an estimate of the quantity of fish consumed.

Each year a Land Use Census is performed to determine what potential dose pathways currently exist within a five-mile radius around the plant, the area most affected by plant operations. The Annual Land Use Census identifies the locations of vegetable gardens, nearest residences, milk animals and meat animals. The data from the census is used to determine who is the likely to be most exposed to radiation dose as a result of plant operation.

There is significant uncertainty in dose calculation results, due to modeling dispersion of material released and bioaccumulation factors, as well as assumptions associated with consumption and land-use patterns. Even with these sources of uncertainty, the calculations do provide a reasonable estimate of the order of magnitude of the exposure. Conservative assumptions are made in the calculation inputs such as the number of various foods and water consumed, the amount of air inhaled, and the amount of direct radiation exposure from the ground or plume, such that the actual dose received are likely lower than the calculated dose. Even with the built-in conservatism, doses calculated for the maximum exposed individual due to plant operation are a very small fraction of the annual dose that is received due to other sources. The calculated doses due to plant effluents, along with REMP results, serve to provide assurance that radioactive effluents releases are not exceeding safety standards for the environment or people living near the plant.

4.0 DOSE ASSESSMENT FOR PLANT OPERATIONS

4.1 Regulatory Limits

Regulatory limits are detailed in station licensing documents such as the plant Technical Specifications and the Offsite Dose Calculation Manual (ODCM). These documents contain the limits to which CCEC must adhere. CCEC drives to maintain the philosophy to keep dose "as low as is reasonably achievable" (ALARA) and actions are taken to reduce the amount of radiation released to the environment. Liquid and gaseous release data show that the dose from CCEC is well below the ODCM limits. The instantaneous concentration of liquid radioactive material released shall be limited to ten times the concentration specified in 10 CFR 20, Appendix B, Table 2, Column 2, for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the total concentration released shall be limited to 2.0×10^{-4} microcuries/ml.

The annual whole body, skin and organ dose was computed using the 2024 source term using the dose calculation methodology provided in the ODCM. The calculated doses due to gaseous effluents are used to demonstrate compliance with offsite dose limits are presented in Table 1, Clinton Clean Energy Center Dose Summary and Table 2, Total Annual Offsite-Dose Comparison to 40 CFR 190 Limits for CCEC.

4.2 Regulatory Limits for Gaseous Effluent Doses:

1. Fission and activation gases:

    a. Noble gases dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the site boundary shall be limited to the following:

        1) Less than or equal to 500 mrem/year to the total body

        2) Less than or equal to 3000 mrem/year to the skin

    b. Noble gas air dose due to noble gases released in gaseous effluents, from each reactor unit, to areas at and beyond the site boundary shall be limited to the following:

        1) Quarterly

            a) Less than or equal to 5 mrads gamma

            b) Less than or equal to 10 mrads beta

        2) Yearly

            a) Less than or equal to 10 mrads gamma

            b) Less than or equal to 20 mrads beta

4.2 (Continued)

2. Iodine, tritium, and all radionuclides in particulate form with half-lives greater than 8 days.

   a. The dose rate for iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from the site to areas at and beyond the site boundary shall be limited to the following:

      1) Less than or equal to 1500 mrem/yr to any organ

   b. The dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 DAYS in gaseous effluents released, from each reactor unit to areas at and beyond the site boundary shall be limited to the following:

      1) Quarterly

         a) Less than or equal to 7.5 mrem to any organ

      2) Yearly

         a) Less than or equal to 15 mrem to any organ

4.3 Regulatory Limits for Liquid Effluent Doses

1. The dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released, from each reactor unit to unrestricted areas shall be limited to the following:

   a. Quarterly

      1) Less than or equal to 1.5 mrem total body

      2) Less than or equal to 5 mrem critical organ

   b. Yearly

      1) Less than or equal to 3 mrem total body

      2) Less than or equal to 10 mrem critical organ

4.4 40 CFR 190 Regulatory Dose Limits for a Member of the Public

1. Total Dose (40 CFR 190)

   a. The annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC in the unrestricted area due to releases of radioactivity and to radiation from uranium fuel cycle sources shall be limited to the following:

      1) Less than or equal to 25 mrem, Total Body or any Organ except Thyroid.

      2) Less than or equal to 75 mrem, Thyroid.

4.5 Onsite Doses (Within Site Boundary)

CCEC classifies individuals within the site boundary as either occupationally exposed individuals or members of the public. This section evaluates dose to non-occupationally exposed workers and members of the public that may be onsite for various reasons. The report must include any other information as may be required by the Commission to estimate maximum potential annual radiation doses to the public resulting from effluent releases as required by 10 CFR 50.36a(a)(2). While within controlled or restricted areas, the limits from Sections 4.1 through 4.4 do not apply; however, 10 CFR 20.1301 dose limit of 100 mrem per year TEDE and dose rate limit of 2 mrem per hour from external sources continue to apply. Occupancy times within the controlled areas are generally sufficiently low to compensate for increase in the atmospheric dispersion factor above the site boundary. Use of a conservative assumption of the number of hours/week spent inside the site boundary by these groups conservatively represents the most-exposed individual.

Table 3, Onsite Doses to Members of the Public

Location	Sector	Approx. Distance (Meters)	Noble Gas Gamma (mrad)	Noble Gas Beta (mrad)	NG, Iodine, Particulate, H-3, C-14		Max Organ
					Total Body (mrem)	Skin (mrem)	Bone (mrem)
DNR Rec Area	ESE	1287	2.16E-4	1.10E-4	1.88E-04	4.18E-05	7.24E-04
SE Road	SE	495	8.19E-5	4.20E-5	7.03E-05	1.59E-05	2.59E-04
Clinton Lake	NW	335	4.75E-5	2.43E-5	3.71E-04	5.40E-05	1.51E-03
Residence	SSE	2736	2.72E-4	1.39E-4	1.33E-04	2.35E-05	4.49E-04
Farm Acreage	SSW	1372	4.58E-5	2.33E-5	2.57E-05	7.47E-06	8.01E-05
Residence	SW	1219	4.48E-4	2.29E-4	2.50E-04	7.05E-05	7.82E-04
Residence	WSW	2414	2.63E-4	1.34E-4	1.28E-04	2.23E-05	4.32E-04

4.5 (Continued)

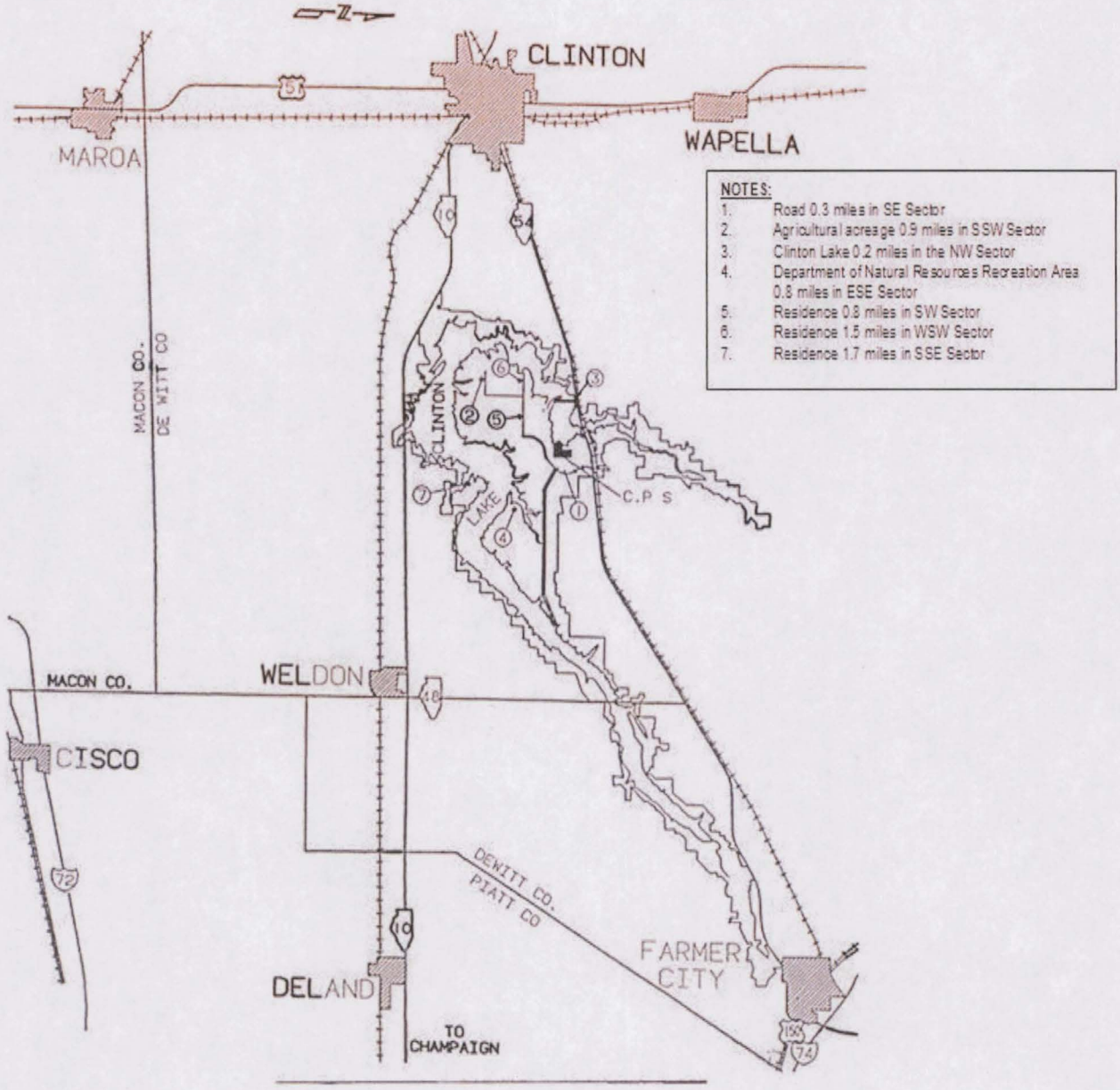


Figure 5, Map of Onsite Members of Public

4.6 Dose To Nearest Resident

Doses to each individual resident nearest to CCEC is calculated in accordance with the methodology of the Clinton Power Station Offsite Dose Calculation Manual (ODCM) and reported in accordance with Section 6.2 of the ODCM.

Table 4, Dose to Nearest Resident

RECEPTOR INFORMATION					AIRBORNE EFFLUENT DOSE					WATERBORNE EFFLUENT DOSE (mrem)	
					Iodines and Particulates (mrem)			Noble Gases (mrad)			
Sector	Distance (km)	Pathways	Organ	Age	Organ	Skin	Total Body	Gamma	Beta	Organ	Total Body
N	1.50	GP, I, M	B	A	2.32E-02	1.10E-04	4.82E-03	7.76E-04	3.97E-04	0.00E+00	0.00E+00
NNE	1.50	GP, I	B	A	1.60E-03	1.52E-04	4.75E-04	9.05E-04	4.62E-04		
NE	2.07	GP, I	B	A	4.59E-04	1.36E-05	2.16E-04	6.58E-04	1.23E-04		
ENE	4.20	GP, I, V	B	C	6.62E-04	2.74E-05	1.26E-03	2.83E-04	1.46E-04		
E	1.67	GP, I	B	T	9.54E-04	6.70E-05	2.69E-04	4.22E-04	2.16E-04		
ESE	5.14	GP, I	B	A	5.56E-04	2.42E-05	1.61E-04	3.35E-04	1.71E-04		
SE	4.44	GP, I	B	A	7.20E-04	3.87E-05	2.14E-04	4.31E-04	2.20E-04		
SSE	2.90	GP, I	B	A	4.37E-04	2.16E-05	1.28E-04	2.65E-04	1.35E-04		
S	4.78	GP, I	B	A	3.70E-04	1.34E-05	1.06E-04	2.28E-04	1.17E-04		
SSW	4.68	GP, I	B	A	3.58E-04	1.31E-05	1.02E-04	2.19E-04	1.12E-04		
SW	1.17	GP, I	B	A	8.31E-04	9.25E-05	2.76E-04	4.67E-04	2.38E-04		
WSW	3.62	GP, I , V	B	A	2.83E-03	1.32E-05	6.50E-04	2.39E-04	1.22E-04		
W	1.95	GP, I	B	T	6.06E-04	3.81E-06	1.57E-04	2.28E-04	1.16E-04		
WNW	2.63	GP, I, V	B	A	3.11E-03	1.86E-05	7.16E-04	2.63E-04	1.34E-04		
NW	2.65	GP, I,	B	A	5.20E-04	1.18E-05	1.38E-04	2.73E-04	1.40E-04		
NNW	2.05	GP, I, M	B	A	1.34E-02	4.18E-05	2.74E-03	4.55E-04	2.32E-04		

Pathways	Organ	Age
GP = Ground Plane	B = Bone	A = Adult
I = Inhalation		T = Teen
M = Meat		I = Infant
V = Vegetation		C = Child

4.6 (Continued)

Table 5, Noble Gas Gamma and Beta Air Dose at the Site Boundary

Sector	Noble Gas	Approx. Distance (Meters)	Noble Gas Gamma (mrad)	Noble Gas Beta (mrad)
	Undepleted X/Q (sec/m^3)			
N	1.31E-07	1400	8.84E-04	4.52E-04
NNE	1.62E-07	1341	1.09E-03	5.59E-04
NE	1.03E-07	1097	6.95E-04	3.35E-04
ENE	8.02E-08	1219	5.41E-04	2.77E-04
E	8.21E-08	1219	5.54E-04	2.83E-04
ESE	5.64E-08	4816	3.81E-04	1.94E-04
SE	6.93E-08	3842	4.68E-04	2.39E-04
SSE	3.87E-08	3353	2.61E-04	1.33E-04
S	4.40E-08	3343	2.97E-04	1.52E-04
SSW	3.48E-08	4633	2.35E-04	1.20E-04
SW	3.41E-08	5121	2.30E-04	1.18E-04
WSW	3.81E-08	3414	2.57E-04	1.31E-04
W	3.94E-08	2256	2.66E-04	1.36E-04
WNW	5.19E-08	1097	3.50E-04	1.79E-04
NW	5.67E-08	1463	3.83E-04	1.96E-04
NNW	7.62E-08	1585	5.14E-04	2.63E-04

5.0 SUPPLEMENTAL INFORMATION

5.1 Gaseous Batch Releases

5.1.1 CCEC

Number of batch releases	0
Total time period for a batch release	0 minutes
Maximum time period for a batch release	0 minutes
Average time period for a batch release	0 minutes
Minimum time period for a batch release	0 minutes

5.2 Liquid Batch Releases

5.2.1 CCEC

Number of batch releases	0
Total time period for a batch release	0 minutes
Maximum time period for a batch release	0 minutes
Average time period for a batch release	0 minutes
Minimum time period for a batch release	0 minutes
Average total flow during period of release	0 gpm

5.3 Abnormal Releases

5.3.1 Gaseous Abnormal Releases

Number of releases	0
Total activity released	0 Ci

5.3.2 Liquid Abnormal Releases

Number of releases	0
Total activity released	0 Ci

5.4 Land Use Census Changes

This data was used to update information to the nearest resident in each sector for the calculation of dose.

Change Description	Change Date	Changes to Receptor	Receptor Location	Sample Media Changes / Availability	Routes of Exposure
Nearest Resident	10/7/2024	Add Child	ENE 2.86 km from 4.2 km	N/A	Add Broadleaf Vegetation
Nearest Resident	10/7/2024	Add Teen	E 1.67 km	N/A	Remove Broadleaf Vegetation
Nearest Resident	10/7/2024	Adult only	SE 3.9 km from 4.44 km	N/A	N/A
Nearest resident	10/7/2024	N/A	WSW 3.62 km	N/A	Add Broadleaf Vegetation

5.5 Meteorological Data

The CCEC Meteorological Program achieved a 99.7% Joint Frequency Distribution (JFD) for 2024. The quarterly JFDs are included in Attachment 3, Meteorological Data.

Hours of Missing Data	Date(s) of Missing Data	Description of Missing Data Event
124	3/7/24 – 3/15/24	Failed 60m Wind Speed Sensor AR 04676727

5.6 Effluent Radiation Monitors Out of Service Greater Than 30 Days

No effluent radiation monitor at Clinton was out of service for greater than 30 days in 2024.

5.7 Offsite Dose Calculation Manual (ODCM) Changes

There were no changes to the Clinton ODCM in 2024.

5.8 Process Control Program (PCP) Changes

There were no changes to the Clinton Process Control Program in 2024.

5.9 Radioactive Waste Treatment System Changes

There were no changes to the Clinton gaseous radioactive waste treatment system, liquid radioactive waste treatment system, or the ventilation exhaust treatment system in 2024.

5.10 Other Supplemental Information

5.10.1 Temporary Outside Tanks

No temporary outside tanks exceeded ODCM or Technical Specification limits in 2024.

5.10.2 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Program

No radioactive effluents were released from the Clinton Station ISFSI for the period January 1, 2024, through December 31, 2024. The ISFSI dose contribution is in the form of direct radiation as no liquid or gas releases are expected to occur from the ISFSI canisters. The CCEC 10CFR72.212 Report prepared in accordance with 10CFR72 requirements assumes a certain array of storage modules exists on the pad.

The dose contribution from this array of casks combination with historical uranium fuel cycle operations prior to ISFSI operations was analyzed to be within 40CFR190 and 10CFR72.104 limits and is documented in Holtec Report No. HI-2135750, "Site Boundary Dose Rate Calculations for HI-STORM FW System for Clinton Power Station".

The REMP Dosimeters recorded no net direct radiation dose to any Member of the Public from the ISFSI.

5.10.3 Carbon-14

Carbon-14 (C-14) is a naturally occurring radionuclide with a 5,730-year half-life. Nuclear weapons testing in the 1950s and 1960s significantly increased the amount of C-14 in the atmosphere. Nuclear power plants also produce C-14, but the amount is infinitesimal compared to what has been distributed in the environment due to weapons testing and what is produced by natural cosmic ray interactions.

In accordance with Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste," the NRC recommended re-evaluating "principal radionuclides" and reporting C-14 as appropriate. Carbon-14 production and release estimates were calculated using active core coolant mass, average neutron flux by energy and reactor coolant nitrogen concentrations to determine Carbon-14 generation based upon an effective full power year. The estimated generation for Clinton Clean Energy Center during 2024 was 17.5 Curies.

Public dose estimates were performed using methodology from the ODCM which is based on Regulatory Guide 1.109 methodology.

5.10.4 Errata/Corrections to Previous ARERRs

None

6.0 NEI 07-07 ONSITE RADIOLOGICAL GROUNDWATER MONITORING PROGRAM

Clinton Clean Energy Center has developed a Groundwater Protection Initiative (GPI) program in accordance with NEI 07-07, Industry Ground Water Protection Initiative – Final Guidance Document [9]. The purpose of the GPI is to ensure timely detection and an effective response to situations involving inadvertent radiological releases to groundwater to prevent migration of licensed radioactive material off-site and to quantify impacts on decommissioning. During 2024, CCEC collected and analyzed groundwater samples in accordance with the requirements of CCEC Procedure EN-CL-408-4160, Rev. 6.

This section is included in this report to communicate results of NEI 07-07 Radiological Groundwater Monitoring Program. Monitoring wells installed as part of GPI program are sampled and analyzed as summarized in Table 6, Groundwater Protection Program Monitoring Well Sample Schedule. In addition to reporting results from NEI 07-07 monitoring wells, voluntary communications to offsite governmental agencies for onsite leaks or spills per NEI 07-07 Objective 2.2, are also reported as part of this report. It is important to note, samples and results taken in support of NEI 07-07 groundwater monitoring program are not part of the Radiological Environmental Monitoring Program (REMP) but should be reported as part of ARERR.

Table 6, Groundwater Protection Program Monitoring Well Sample Schedule

Well Name	Tritium	Gamma	HTD	(Other as Needed)
B-3	Annual	Biennial	N/A	N/A
MW-1	Annual	Biennial	N/A	N/A
MW-2	Annual	Biennial	N/A	N/A
MW-CL-12I	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-13I	Annual	Biennial	N/A	N/A
MW-CL-15I	Annual	Biennial	N/A	N/A
MW-CL-15S	Annual	Biennial	N/A	N/A
MW-CL-16S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-17S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-18I	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-13S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-14S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-21S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-22S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-18S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-19S	Quarterly	Biennial	5-Yrs	Sr-89/Sr-90 - Annual Gross Alpha - Biennial
MW-CL-20S	Annual	Biennial	N/A	N/A

NOTE: Additional wells SW-CL-1 through SW-CL-7 are used to measure depth to water only.

6.0 (Continued)

Radiological Groundwater Monitoring Program tritium results are summarized in Table 7, Groundwater Protection Program Monitoring Well Tritium Results.

No groundwater monitoring locations had detectable gamma, gross alpha, or Hard To Detect (HTD) radionuclides in 2024. Three (3) well samples out of 47 exhibited positive tritium results above the LLD of 200 pCi/L in 2024, as summarized in Table 7. These results are consistent with long term trending at CCEC and support the conclusion that there is no indication of an active source of tritium to groundwater at the Station.

Table 7, Groundwater Protection Program Monitoring Well Tritium Results

Well Name	Number of Positive Detections	Number of Analyses	Average Concentration[1] (pCi/L)	Maximum Concentration (pCi/L)
MW-CL-14S	2	4	631	791
MW-CL-16S	1	4	218	218

6.1 Voluntary Notification

During 2024, Clinton Clean Energy Center did not make a voluntary NEI 07-07 notification to State/Local officials, NRC, and to other stakeholders required by site procedures.

[1] Results <MDA should not be included in the average concentration calculation.

7.0 BIBLIOGRAPHY

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[11] "40 CFR 190 - Environmental Radiation Protection Standards for Nuclear Power Operation," US Environmental Protection Agency, Washington, DC.

[12] "10 CFR 20 - Standards for Protection Against Radiation," US Nuclear Regulatory Commission, Washington, DC.

[13] "40 CFR 141 - National Primary Drinking Water Regulations," US Environmental Protection Agency, Washington, DC..

[14] "NUREG-0324 - XOQDOQ, Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations," Nuclear Regulatory Commission, September, 1977.

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[16] "NUREG-1302 - Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors," Nuclear Regulatory Commission, April 1991.

[17] "Regulatory Guide 4.13 - Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications, Revision 2," Nuclear Regulatory Commision, June, 2019.

[18] "Regulatory Guide 4.15 - Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) -- Effluent Streams and the Environment," Nuclear Regulatory Commission, July, 2007.

Attachment 1, ARERR Release Summary Tables (RG-1.21 Tables)

1.0 GASEOUS EFFLUENTS

Table 8, Gaseous Effluents Summation of All Releases for Site[1]

A. Fission & Activation Gases	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual	Est. Total Error %
1. Total Release	Ci	1.81E+00	3.81E+00	8.96E+00	8.32E+00	2.29E+01	3.00E+01
2. Average release rate for the period	µCi/sec	2.30E-01	4.84-01	1.13E+00	1.05E+00	7.24E-01	
B. Iodines and Halogens							
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	3.10E+01
2. Average release rate for the period	µCi/sec	N/A	N/A	N/A	N/A	N/A	
C. Particulates							
1. Total Release	Ci	2.07E-05	7.32E-05	2.14E-04	3.58E05	3.46E-04	2.40E+01
2. Average release rate for the period	µCi/sec	2.64E-06	9.31E-06	2.72E-05	4.51E-06	1.09E-05	
D. Tritium							
1. Total Release	Ci	3.22E+00	2.81E+00	4.51E+00	8.32E+00	2.89E+01	2.10E+01
2. Average release rate for the period	µCi/sec	4.10E-01	3.57E-01	5.68E-01	1.05E+00	1.89E+01	
E. Gross Alpha							
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	N/A
2. Average release rate for the period	µCi/sec	N/A	N/A	N/A	N/A	N/A	
F. Carbon-14							
1. Total Release	Ci	4.32E+00	4.34E+00	4.37E+00	4.06E+00	1.75E+01	
2. Average release rate for the period	µCi/sec	5.50E-01	5.52E-01	5.50E-01	5.11E-01	5.41E-01	

[1] % of applicable limits are provided in Table 1 and Table 2, in terms of dose.

Attachment 1, ARERR Release Summary Tables (RG-1.21 Tables)

Table 9, Gaseous Effluents – Mixed Level Release Continuous Mode (Site)

Radionuclide Released	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total for year
Fission Gases						
Ar-41	Ci	1.81E+00	3.81E+00	8.96E+00	8.32E+00	2.29E+01
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	**Ci**	**1.81E+00**	**3.81E+00**	**8.96E+00**	**8.32E+00**	**2.29E+01**
Iodines						
I-131	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	**Ci**	**<LLD**	**<LLD**	**<LLD**	**<LLD**	**<LLD**
Particulates						
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	4.80E-06	1.72E-06	4.73E-05	8.63E-06	6.24E-05
Mn-54	Ci	8.38E-06	6.19E-06	2.87E-05	5.80E-06	4.91E-05
Zn-65	Ci	7.57E-06	6.53E-05	1.40E-04	2.14E-05	2.34E-04
Total for Period	**Ci**	**2.07E-05**	**7.32E-05**	**2.16E-04**	**3.58E-05**	**3.46E-04**
Tritium						
H-3	Ci	3.22E+00	2.81E+00	4.51E+00	8.32E+00	1.89E+01
Gross Alpha						
Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Carbon-14						
C-14	Ci	4.32E+00	4.34E+00	4.37E+00	4.06E+00	1.75E+01

Attachment 1, ARERR Release Summary Tables (RG-1.21 Tables)

2.0 LIQUID EFFLUENTS

Table 10, Liquid Effluents – Summation of All Releases (Site) [1]

A. Fission & Activation Products	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual	Est. Total Error %
1. Total Release	Ci	N/A	N/A	N/A	N/A	N/A	N/A
2. Average diluted concentration	µCi/mL	N/A	N/A	N/A	N/A	N/A	
B. Tritium							
1. Total Release	Ci	N/A	N/A	N/A	N/A	N/A	N/A
2. Average diluted concentration	µCi/mL	N/A	N/A	N/A	N/A	N/A	
C. Dissolved & Entrained Gases							
1. Total Release	Ci	N/A	N/A	N/A	N/A	N/A	N/A
2. Average diluted concentration	µCi/mL	N/A	N/A	N/A	N/A	N/A	
D. Gross Alpha Activity							
1. Total Release	Ci	N/A	N/A	N/A	N/A	N/A	N/A
2. Average diluted concentration	µCi/mL	N/A	N/A	N/A	N/A	N/A	
E. Volume of Waste Released (prior to dilution)	Liters	N/A	N/A	N/A	N/A	N/A	
F. Volume of Dilution Water Used During Period	Liters	N/A	N/A	N/A	N/A	N/A	

[1] % of applicable limits are provided in Table 1 and Table 2 in terms of dose

Attachment 2, Solid Waste Information

1.0 SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED FUEL)

Table 11, Types of Solid Waste Summary (Site)

Types of Waste	Total Volume (m3)	Total Activity (Ci)	Est. Total Error (%)
a. Spent resins, filter sludges, evaporator bottoms, etc.	8.7E+01	1.17E+02	25
b. Dry compressible waste, contaminated equip, etc.	1.98E+02	8.39E-02	25
c. Irradiated components, control rods, etc.	0.00E+00	0.00E+00	N/A
d. Other (describe)	0.00E+00	0.00E+00	N/A

2.0 ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY WASTE TYPE) ONLY >1% ARE REPORTED. [NOTE 1]

Table 12, Major Nuclides (Site)

Major Nuclide Composition	%	Curies
a. Spent resins, filter sludges, evaporator bottoms, etc.		
Mn-54	22.75%	2.65E+01
Fe-55	53.22%	6.20E+01
Co-60	17.59%	2.05E+01
Ni-63	1.6%	1.87E+00
Zn-65	2.86%	3.34E+00
b. Dry compressible waste, contaminated equip, etc.		
Mn-54	28.45%	2.38E-02
Fe-55	50.51%	4.23E-02
Fe-59	1.14%	9.51E-04
Co-60	17.47%	1.46E-02
Zn-65	1.21%	1.02E-03
c. Irradiated components, control rods, etc.		
N/A	N/A	N/A
d. Other (describe)		
N/A	N/A	N/A

Attachment 2, Solid Waste Information

3.0 SOLID WASTE DISPOSITION

Table 13, Solid Waste Disposition (Site)

Number of Shipments	Mode of Transportation	Destination
6	Hittman Transport	Energy Solutions Bear Creek – 1560 Bear Creek Road
1	Hittman Transport	Energy Solutions LLC – Clive Disposal Site - Bulk Waste Facility
1	Hittman Transport	Energy Solutions LLC – Clive Disposal Site – Containerized Waste Facility
9	Hittman Transport	Energy Solutions LLC – Clive Disposal Site – Treatment Facility

4.0 IRRADIATED FUEL DISPOSITION

Table 14, Irradiated Fuel Shipments Disposition (Site)

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

Attachment 3, Meteorological Data

1.0 METEOROLOGICAL DATA SUMMARY

1.1 Stability class

Table 15, Classification of Atmospheric Stability

Stability Condition	Pasquill Categories	Percentage
Extremely Unstable	A	4.81
Moderately Stable	B	5.21
Slightly Unstable	C	7.04
Neutral	D	37.06
Slightly Stable	E	31.18
Moderately Stable	F	8.76
Extremely Stable	G	5.93

1.2 Joint Frequency Distributions

The following are the quarterly JFD data.

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	7	0	0	0	7
NNE	0	2	4	0	0	0	6
NE	0	0	4	1	0	0	5
ENE	0	1	2	0	0	0	3
E	0	0	3	0	0	0	3
ESE	0	5	1	0	0	0	6
SE	0	0	6	0	0	0	6
SSE	0	2	0	0	0	0	2
S	0	0	8	0	0	0	8
SSW	0	0	2	1	0	0	3
SW	0	0	0	2	2	0	4
WSW	0	0	1	2	1	0	4
W	0	0	3	2	1	0	6
WNW	0	0	3	5	3	0	11
NW	0	0	7	11	1	0	19
NNW	0	0	3	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	10	54	25	8	0	97

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	4	0	0	0	6
NNE	0	1	1	0	0	0	2
NE	0	2	3	0	0	0	5
ENE	0	0	3	0	0	0	3
E	0	0	2	0	0	0	2
ESE	0	4	4	0	0	0	8
SE	0	2	1	1	0	0	4
SSE	0	1	1	0	0	0	2
S	0	3	10	0	0	0	13
SSW	0	1	5	2	0	0	8
SW	0	0	5	3	0	0	8
WSW	0	0	1	4	1	0	6
W	0	0	4	5	0	0	9
WNW	0	0	3	5	0	0	8
NW	0	0	4	4	0	0	8
NNW	0	2	3	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	18	54	24	1	0	97

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	5	0	1	0	7
NNE	0	1	5	0	0	0	6
NE	0	7	3	3	0	0	13
ENE	0	2	2	0	0	0	4
E	0	0	2	0	0	0	2
ESE	0	2	1	0	0	0	3
SE	0	6	1	1	0	0	8
SSE	0	1	1	0	0	0	2
S	0	3	5	4	1	0	13
SSW	0	2	3	4	0	0	9
SW	0	1	2	8	0	0	11
WSW	0	0	2	8	1	0	11
W	0	1	8	9	2	0	20
WNW	0	0	9	4	2	0	15
NW	0	1	12	6	0	0	19
NNW	0	0	4	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	28	65	47	7	0	147

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	8	36	11	1	0	56
NNE	1	8	31	8	0	0	48
NE	0	13	8	0	0	0	21
ENE	0	18	22	0	0	0	40
E	0	24	26	1	0	0	51
ESE	2	27	12	0	0	0	41
SE	2	15	13	2	0	0	32
SSE	1	17	20	9	0	0	47
S	1	17	30	16	5	0	69
SSW	0	15	37	20	6	0	78
SW	0	8	20	11	0	0	39
WSW	1	2	22	18	5	1	49
W	1	9	29	22	13	2	76
WNW	0	15	74	34	14	0	137
NW	1	22	50	17	5	0	95
NNW	1	14	33	6	0	0	54
Variable	0	0	0	0	0	0	0
Total	11	232	463	175	49	3	933

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	19	10	0	0	0	30
NNE	1	21	12	0	0	0	34
NE	0	28	10	1	0	0	39
ENE	3	23	10	0	0	0	36
E	2	18	13	2	0	0	35
ESE	9	21	6	0	0	0	36
SE	7	27	4	1	0	0	39
SSE	5	29	34	4	0	0	72
S	3	33	60	6	0	0	102
SSW	1	18	40	19	3	0	81
SW	1	11	16	7	0	0	35
WSW	2	16	13	6	0	0	37
W	2	21	7	1	0	0	31
WNW	3	15	28	2	0	0	48
NW	1	21	23	6	0	0	51
NNW	2	13	10	0	0	0	25
Variable	0	0	0	0	0	0	0
Total	43	334	296	55	3	0	731

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	0	0	0	0	6
NNE	2	10	0	0	0	0	12
NE	4	18	1	0	0	0	23
ENE	2	2	0	0	0	0	4
E	1	0	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	2	3	0	0	0	0	5
SSE	4	3	0	0	0	0	7
S	1	15	1	0	0	0	17
SSW	1	8	2	0	0	0	11
SW	4	3	1	0	0	0	8
WSW	1	4	2	0	0	0	7
W	4	4	0	0	0	0	8
WNW	4	6	0	0	0	0	10
NW	2	5	0	0	0	0	7
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	34	87	7	0	0	0	128

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	3	8	0	0	0	0	11
ENE	2	0	0	0	0	0	2
E	1	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	1	1	0	0	0	0	2
S	1	3	0	0	0	0	4
SSW	1	2	0	0	0	0	3
SW	0	3	0	0	0	0	3
WSW	2	1	0	0	0	0	3
W	1	0	0	0	0	0	1
WNW	1	2	0	0	0	0	3
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	13	22	0	0	0	0	35

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	3	4	0	0	7
NNE	0	0	6	0	0	0	6
NE	0	0	1	2	1	0	4
ENE	0	0	1	2	0	0	3
E	0	0	5	0	0	0	5
ESE	0	0	5	0	0	0	5
SE	0	0	2	5	0	0	7
SSE	0	1	0	1	0	0	2
S	0	0	1	6	0	0	7
SSW	0	0	1	2	0	0	3
SW	0	0	0	1	2	2	5
WSW	0	0	2	1	1	2	6
W	0	0	2	1	2	0	5
WNW	0	0	0	3	6	4	13
NW	0	0	0	12	3	1	16
NNW	0	0	1	2	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	1	30	42	15	9	97

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	2	0	0	4
NNE	0	0	4	0	0	0	4
NE	0	0	3	0	0	0	3
ENE	0	0	0	4	0	0	4
E	0	0	2	0	0	0	2
ESE	0	1	6	2	0	0	9
SE	0	0	2	1	0	0	3
SSE	0	2	1	2	0	0	5
S	0	0	8	2	0	0	10
SSW	0	0	4	4	1	0	9
SW	0	0	2	3	3	0	8
WSW	0	0	1	4	1	1	7
W	0	0	0	5	5	0	10
WNW	0	0	1	2	3	0	6
NW	0	0	1	5	2	0	8
NNW	0	2	1	2	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	6	37	38	15	1	97

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	4	0	1	7
NNE	0	0	3	2	0	0	5
NE	0	5	5	0	4	0	14
ENE	0	2	0	3	0	0	5
E	0	0	1	2	0	0	3
ESE	0	0	3	0	0	0	3
SE	0	0	4	1	1	0	6
SSE	0	0	1	3	0	0	4
S	0	1	3	4	1	4	13
SSW	0	1	1	2	5	0	9
SW	0	0	2	6	2	1	11
WSW	0	1	0	5	3	2	11
W	0	0	3	7	6	3	19
WNW	0	1	6	6	5	2	20
NW	0	0	4	7	2	0	13
NNW	0	0	1	3	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	12	38	55	29	13	147

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	7	30	12	1	55
NNE	0	3	13	24	6	1	47
NE	1	5	7	3	4	0	20
ENE	0	0	12	22	5	0	39
E	0	2	14	30	5	1	52
ESE	0	1	23	15	3	0	42
SE	2	6	13	11	5	0	37
SSE	0	9	16	7	11	10	53
S	0	4	14	22	21	17	78
SSW	0	7	22	34	6	2	71
SW	0	0	8	14	6	3	31
WSW	1	1	10	20	15	10	57
W	0	4	22	29	22	20	97
WNW	0	5	22	48	19	19	113
NW	1	4	30	43	17	3	98
NNW	1	0	13	27	2	0	43
Variable	0	0	0	0	0	0	0
Total	6	56	246	379	159	87	933

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	19	11	1	0	35
NNE	0	3	12	12	0	0	27
NE	0	4	12	12	9	0	37
ENE	0	4	14	11	4	0	33
E	0	4	9	19	7	2	41
ESE	4	1	8	8	6	0	27
SE	3	8	26	9	1	1	48
SSE	0	3	25	36	22	3	89
S	1	2	11	40	28	11	93
SSW	0	2	9	31	16	3	61
SW	0	2	15	27	5	0	49
WSW	1	4	11	9	12	0	37
W	0	2	15	11	1	0	29
WNW	0	3	12	26	8	2	51
NW	0	6	16	17	6	1	46
NNW	1	3	10	13	1	0	28
Variable	0	0	0	0	0	0	0
Total	10	55	224	292	127	23	731

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	7	4	0	0	11
NE	0	0	8	4	1	0	13
ENE	1	0	11	3	0	0	15
E	0	0	4	0	0	0	4
ESE	0	0	0	0	0	0	0
SE	0	1	0	1	0	0	2
SSE	0	1	1	1	0	0	3
S	0	1	8	8	0	0	17
SSW	0	1	4	8	0	0	13
SW	0	1	2	4	1	0	8
WSW	0	1	2	7	0	0	10
W	1	2	2	1	0	0	6
WNW	0	3	4	2	0	0	9
NW	0	4	7	3	0	0	14
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	2	15	63	46	2	0	128

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: January - March 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	1	0	0	0	1
NE	1	1	0	2	0	0	4
ENE	0	2	2	0	0	0	4
E	1	0	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	2	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	1	4	0	0	5
SW	0	1	2	0	0	0	3
WSW	0	0	0	3	0	0	3
W	0	0	2	1	0	0	3
WNW	0	2	0	1	0	0	3
NW	0	3	1	0	0	0	4
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	2	11	11	11	0	0	35

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 16

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	12	0	0	0	16
NNE	0	4	7	0	0	0	11
NE	0	0	4	0	0	0	4
ENE	0	3	1	0	0	0	4
E	0	2	0	0	0	0	2
ESE	0	4	2	0	0	0	6
SE	0	4	2	0	0	0	6
SSE	0	0	1	0	0	0	1
S	0	1	3	2	0	0	6
SSW	0	1	11	5	0	0	17
SW	0	1	12	2	0	0	15
WSW	0	1	4	1	0	0	6
W	0	0	4	0	0	0	4
WNW	0	0	9	6	0	0	15
NW	0	1	22	3	0	0	26
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	27	95	19	0	0	141

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	4	0	0	0	6
NNE	0	2	4	0	0	0	6
NE	0	2	8	0	0	0	10
ENE	0	3	1	0	0	0	4
E	0	3	0	0	0	0	3
ESE	0	5	0	0	0	0	5
SE	0	2	4	0	0	0	6
SSE	0	2	0	0	0	0	2
S	0	6	4	0	0	0	10
SSW	0	9	13	0	0	0	22
SW	0	4	3	2	0	0	9
WSW	0	1	5	1	0	0	7
W	0	3	5	0	0	0	8
WNW	0	1	8	7	0	0	16
NW	0	3	6	2	1	0	12
NNW	0	0	3	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	48	68	12	1	0	129

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	8	2	0	0	0	10
NNE	0	5	3	0	0	0	8
NE	0	3	5	0	0	0	8
ENE	0	1	2	0	0	0	3
E	0	3	0	0	0	0	3
ESE	0	2	1	0	0	0	3
SE	0	5	1	0	0	0	6
SSE	1	6	0	0	0	0	7
S	0	8	6	0	0	0	14
SSW	0	5	7	5	0	0	17
SW	0	9	7	3	0	0	19
WSW	0	4	5	2	0	0	11
W	0	0	3	1	4	0	8
WNW	0	6	3	4	0	0	13
NW	0	4	4	1	1	0	10
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	1	70	50	16	5	0	142

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	20	21	1	0	0	42
NNE	2	16	20	1	0	0	39
NE	2	14	14	2	0	0	32
ENE	3	27	4	0	0	0	34
E	0	15	5	0	0	0	20
ESE	2	7	10	0	0	0	19
SE	1	20	15	1	0	0	37
SSE	5	34	16	4	1	0	60
S	1	24	49	9	5	0	88
SSW	1	13	39	47	3	0	103
SW	0	19	39	4	0	0	62
WSW	1	12	8	4	1	0	26
W	4	5	8	11	6	0	34
WNW	0	7	26	30	3	0	66
NW	2	19	36	22	3	0	82
NNW	0	14	16	0	0	0	30
Variable	0	0	0	0	0	0	0
Total	24	266	326	136	22	0	774

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	17	7	0	0	0	27
NNE	1	15	5	1	0	0	22
NE	4	26	0	0	0	0	30
ENE	4	23	2	0	0	0	29
E	4	15	10	0	0	0	29
ESE	9	32	11	0	0	0	52
SE	8	38	6	0	0	0	52
SSE	8	45	13	7	1	0	74
S	11	54	22	6	3	0	96
SSW	4	35	53	11	3	0	106
SW	4	19	14	5	1	0	43
WSW	3	18	6	0	0	0	27
W	3	14	5	0	0	0	22
WNW	5	14	15	2	0	0	36
NW	0	25	5	1	0	0	31
NNW	6	24	6	0	0	0	36
Variable	0	0	0	0	0	0	0
Total	77	414	180	33	8	0	712

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	1	0	0	0	0	6
NNE	3	3	0	0	0	0	6
NE	13	10	0	0	0	0	23
ENE	2	1	0	0	0	0	3
E	8	6	0	0	0	0	14
ESE	4	1	0	0	0	0	5
SE	7	3	0	0	0	0	10
SSE	2	2	0	0	0	0	4
S	4	15	0	0	0	0	19
SSW	8	18	0	0	0	0	26
SW	7	6	0	0	0	0	13
WSW	9	8	0	0	0	0	17
W	10	8	0	0	0	0	18
WNW	4	10	2	0	0	0	16
NW	7	5	0	0	0	0	12
NNW	1	2	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	94	99	3	0	0	0	196

Hours of calm in this stability class: 2
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	1	0	0	0	0	5
NNE	6	2	0	0	0	0	8
NE	11	2	0	0	0	0	13
ENE	3	1	0	0	0	0	4
E	3	0	0	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	2	0	0	0	0	0	2
SSE	0	2	0	0	0	0	2
S	1	1	0	0	0	0	2
SSW	3	3	0	0	0	0	6
SW	3	2	0	0	0	0	5
WSW	1	1	1	0	0	0	3
W	5	0	0	0	0	0	5
WNW	5	2	0	0	0	0	7
NW	4	1	0	0	0	0	5
NNW	5	1	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	56	19	1	0	0	0	76

Hours of calm in this stability class: 12
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	12	5	0	0	17
NNE	0	0	6	4	0	0	10
NE	0	0	2	1	0	0	3
ENE	0	0	5	0	0	0	5
E	0	1	2	0	0	0	3
ESE	0	0	7	0	0	0	7
SE	0	0	5	0	0	0	5
SSE	0	0	0	0	0	0	0
S	0	1	0	6	4	1	12
SSW	0	0	3	8	1	0	12
SW	0	2	8	5	1	0	16
WSW	0	0	0	5	0	0	5
W	0	0	1	2	0	0	3
WNW	0	0	1	12	3	0	16
NW	0	0	5	18	1	1	25
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	4	58	67	10	2	141

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	4	1	0	0	6
NNE	0	1	4	1	0	0	6
NE	0	2	3	4	0	0	9
ENE	0	0	5	1	0	0	6
E	0	1	1	0	0	0	2
ESE	0	1	4	0	0	0	5
SE	0	3	4	1	0	0	8
SSE	0	0	1	0	0	0	1
S	0	2	8	4	0	0	14
SSW	0	2	7	8	1	0	18
SW	0	1	5	1	1	0	8
WSW	0	0	3	3	1	0	7
W	0	0	7	2	0	0	9
WNW	0	1	2	4	7	2	16
NW	0	1	4	4	1	1	11
NNW	0	0	1	2	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	16	63	36	11	3	129

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	6	2	0	0	10
NNE	0	2	5	1	0	0	8
NE	0	0	2	3	0	0	5
ENE	0	3	1	2	0	0	6
E	0	1	1	0	0	0	2
ESE	0	0	2	1	0	0	3
SE	0	7	2	0	0	0	9
SSE	0	3	1	0	0	0	4
S	0	4	6	4	3	2	19
SSW	0	2	10	4	1	1	18
SW	0	4	7	5	1	1	18
WSW	0	2	2	1	1	1	7
W	0	0	3	4	0	3	10
WNW	0	0	7	1	4	1	13
NW	0	3	0	4	0	0	7
NNW	0	1	1	1	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	34	56	33	10	9	142

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	21	17	4	0	47
NNE	0	7	9	15	1	0	32
NE	1	6	9	11	5	0	32
ENE	0	7	22	7	0	0	36
E	0	0	11	9	0	0	20
ESE	0	3	8	8	4	0	23
SE	1	8	15	15	2	1	42
SSE	0	8	28	21	8	4	69
S	0	11	13	32	23	19	98
SSW	1	6	15	33	30	3	88
SW	0	3	23	25	5	0	56
WSW	0	4	10	3	4	3	24
W	1	2	4	7	11	8	33
WNW	2	0	13	22	22	15	74
NW	0	6	17	33	13	2	71
NNW	0	5	10	13	1	0	29
Variable	0	0	0	0	0	0	0
Total	6	81	228	271	133	55	774

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	13	9	1	0	25
NNE	0	2	8	7	1	0	18
NE	0	2	9	12	0	0	23
ENE	0	1	13	17	1	0	32
E	1	3	12	14	4	0	34
ESE	0	1	15	24	7	0	47
SE	0	9	39	17	1	0	66
SSE	0	3	33	36	5	8	85
S	0	5	33	43	14	10	105
SSW	0	3	17	43	9	4	76
SW	2	3	20	19	6	0	50
WSW	0	2	5	14	0	0	21
W	1	1	9	10	0	0	21
WNW	0	0	14	13	6	1	34
NW	0	3	25	8	1	0	37
NNW	2	6	15	14	1	0	38
Variable	0	0	0	0	0	0	0
Total	6	46	280	300	57	23	712

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	3	0	0	0	4
NNE	1	1	4	0	0	0	6
NE	0	1	6	5	0	0	12
ENE	0	2	9	2	0	0	13
E	0	3	4	2	0	0	9
ESE	0	2	9	2	0	0	13
SE	1	6	7	0	0	0	14
SSE	0	2	2	3	0	0	7
S	0	0	7	4	0	0	11
SSW	0	0	12	7	0	0	19
SW	0	5	9	5	0	0	19
WSW	0	2	5	7	0	0	14
W	0	1	11	4	0	0	16
WNW	0	1	16	6	1	0	24
NW	0	2	4	3	0	0	9
NNW	0	1	4	3	0	0	8
Variable	0	0	0	0	0	0	0
Total	2	30	112	53	1	0	198

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: April - June 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	2	0	0	0	5
NNE	1	4	3	0	0	0	8
NE	0	3	5	0	0	0	8
ENE	0	1	2	1	0	0	4
E	1	1	5	0	0	0	7
ESE	0	0	4	0	0	0	4
SE	1	1	1	0	0	0	3
SSE	1	1	3	0	0	0	5
S	1	2	0	0	0	0	3
SSW	0	1	2	1	0	0	4
SW	1	3	3	4	1	0	12
WSW	1	1	4	0	0	0	6
W	0	2	2	0	0	0	4
WNW	0	0	3	2	0	0	5
NW	0	0	4	0	0	0	4
NNW	1	2	3	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	8	25	46	8	1	0	88

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	17	0	0	0	23
NNE	0	2	6	0	0	0	8
NE	0	5	2	0	0	0	7
ENE	0	3	6	0	0	0	9
E	0	6	0	0	0	0	6
ESE	0	12	0	0	0	0	12
SE	0	5	0	0	0	0	5
SSE	0	2	4	0	0	0	6
S	0	4	5	0	0	0	9
SSW	0	2	16	0	0	0	18
SW	0	2	0	0	0	0	2
WSW	0	1	1	0	0	0	2
W	0	1	2	0	0	0	3
WNW	0	1	6	0	0	0	7
NW	0	5	9	0	0	0	14
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	58	75	0	0	0	133

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	1	0	0	0	8
NNE	0	2	4	0	0	0	6
NE	0	2	6	0	0	0	8
ENE	0	9	0	0	0	0	9
E	0	7	0	0	0	0	7
ESE	0	9	0	0	0	0	9
SE	0	9	0	0	0	0	9
SSE	0	2	0	0	0	0	2
S	1	5	2	0	0	0	8
SSW	0	6	15	0	0	0	21
SW	0	3	4	0	0	0	7
WSW	0	9	11	0	0	0	20
W	0	5	12	0	0	0	17
WNW	0	3	7	0	0	0	10
NW	0	9	0	0	0	0	9
NNW	1	3	6	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	2	90	68	0	0	0	160

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 5
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	2	0	0	0	7
NNE	1	3	4	1	0	0	9
NE	0	7	8	0	0	0	15
ENE	2	10	1	0	0	0	13
E	0	10	0	0	0	0	10
ESE	0	8	0	0	0	0	8
SE	1	13	0	0	0	0	14
SSE	0	10	1	0	0	0	11
S	1	7	4	0	0	0	12
SSW	0	8	6	0	0	0	14
SW	0	7	3	1	0	0	11
WSW	0	3	6	0	0	0	9
W	0	7	3	0	0	0	10
WNW	1	4	6	1	0	0	12
NW	0	10	6	0	0	0	16
NNW	0	7	1	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	6	119	51	3	0	0	179

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	20	12	0	0	0	33
NNE	2	25	23	13	4	0	67
NE	5	21	18	3	0	0	47
ENE	3	27	3	0	0	0	33
E	8	24	0	0	0	0	32
ESE	6	15	0	0	0	0	21
SE	5	21	3	0	0	0	29
SSE	4	20	4	0	0	0	28
S	6	35	6	0	0	0	47
SSW	2	21	23	1	0	0	47
SW	4	25	4	0	0	0	33
WSW	2	24	11	2	0	0	39
W	3	14	4	2	0	0	23
WNW	4	18	11	0	0	0	33
NW	2	31	12	0	0	0	45
NNW	1	13	2	0	0	0	16
Variable	0	0	0	0	0	0	0
Total	58	354	136	21	4	0	573

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 18
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	12	28	4	0	0	0	44
NNE	6	23	5	2	1	0	37
NE	10	12	6	3	0	0	31
ENE	8	30	0	0	0	0	38
E	10	20	2	0	0	0	32
ESE	16	16	0	0	0	0	32
SE	10	19	0	0	0	0	29
SSE	16	29	1	0	0	0	46
S	8	42	4	0	0	0	54
SSW	3	49	14	0	0	0	66
SW	11	17	9	0	0	0	37
WSW	12	10	0	0	0	0	22
W	8	21	1	0	0	0	30
WNW	8	28	0	1	0	0	37
NW	4	26	2	0	0	0	32
NNW	1	10	3	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	143	380	51	6	1	0	581

Hours of calm in this stability class: 2
Hours of missing wind measurements in this stability class: 17
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	4	0	0	0	0	11
NNE	9	15	0	0	0	0	24
NE	21	26	0	0	0	0	47
ENE	11	18	0	0	0	0	29
E	9	15	0	0	0	0	24
ESE	11	4	0	0	0	0	15
SE	5	1	0	0	0	0	6
SSE	5	2	0	0	0	0	7
S	8	5	0	0	0	0	13
SSW	5	3	0	0	0	0	8
SW	6	5	0	0	0	0	11
WSW	10	8	0	0	0	0	18
W	21	0	0	0	0	0	21
WNW	17	1	0	0	0	0	18
NW	5	4	1	0	0	0	10
NNW	4	1	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	154	112	1	0	0	0	267

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 7
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	1	0	0	0	0	7
NNE	29	23	0	0	0	0	52
NE	37	48	0	0	0	0	85
ENE	10	5	0	0	0	0	15
E	10	1	0	0	0	0	11
ESE	6	1	0	0	0	0	7
SE	9	0	0	0	0	0	9
SSE	13	3	0	0	0	0	16
S	6	0	0	0	0	0	6
SSW	1	1	0	0	0	0	2
SW	12	3	0	0	0	0	15
WSW	8	1	0	0	0	0	9
W	11	0	0	0	0	0	11
WNW	0	0	0	0	0	0	0
NW	4	0	0	0	0	0	4
NNW	3	0	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	165	87	0	0	0	0	252

Hours of calm in this stability class: 4
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	6	16	0	0	22
NNE	0	0	2	2	0	0	4
NE	0	1	7	0	0	0	8
ENE	0	1	5	4	0	0	10
E	0	0	9	0	0	0	9
ESE	0	4	7	0	0	0	11
SE	0	1	1	0	0	0	2
SSE	0	0	1	5	0	0	6
S	0	1	12	9	0	0	22
SSW	0	0	3	1	0	0	4
SW	0	0	2	0	0	0	2
WSW	0	0	2	0	0	0	2
W	0	0	1	2	0	0	3
WNW	0	0	10	5	0	0	15
NW	0	1	7	1	0	0	9
NNW	0	0	5	2	0	0	7
Variable	0	0	0	0	0	0	0
Total	0	9	80	47	0	0	136

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	2	4	0	0	10
NNE	0	0	1	1	0	0	2
NE	0	2	3	4	0	0	9
ENE	0	3	8	0	0	0	11
E	0	3	7	0	0	0	10
ESE	0	5	3	0	0	0	8
SE	0	4	2	0	0	0	6
SSE	0	3	0	1	0	0	4
S	0	4	7	6	0	0	17
SSW	0	0	9	4	0	0	13
SW	0	0	9	0	0	0	9
WSW	0	2	17	0	0	0	19
W	0	0	8	6	0	0	14
WNW	0	1	5	7	0	0	13
NW	0	2	7	1	0	0	10
NNW	1	0	5	4	0	0	10
Variable	0	0	0	0	0	0	0
Total	1	33	93	38	0	0	165

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	4	1	1	0	0	7
NNE	1	2	1	4	1	0	9
NE	1	4	10	2	0	0	17
ENE	0	7	4	1	0	0	12
E	0	4	3	1	0	0	8
ESE	0	6	6	0	0	0	12
SE	0	16	1	0	0	0	17
SSE	0	7	0	2	0	0	9
S	0	5	5	3	0	0	13
SSW	0	2	5	4	0	0	11
SW	0	3	5	1	0	0	9
WSW	0	4	8	2	0	0	14
W	0	2	4	3	0	0	9
WNW	0	2	4	6	1	0	13
NW	1	8	4	2	0	0	15
NNW	0	3	3	1	0	0	7
Variable	0	0	0	0	0	0	0
Total	4	79	64	33	2	0	182

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	6	14	14	2	2	39
NNE	1	7	14	21	12	7	62
NE	3	5	26	9	4	0	47
ENE	3	18	15	4	0	0	40
E	3	13	11	0	0	0	27
ESE	4	11	11	2	0	0	28
SE	2	9	10	3	0	0	24
SSE	6	11	16	6	0	0	39
S	1	8	25	14	0	0	48
SSW	1	8	18	11	1	0	39
SW	2	14	19	5	1	0	41
WSW	2	4	21	3	2	0	32
W	1	6	13	5	1	1	27
WNW	1	18	11	7	3	0	40
NW	0	11	23	3	0	0	37
NNW	1	5	10	5	0	0	21
Variable	0	0	0	0	0	0	0
Total	32	154	257	112	26	10	591

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	8	22	17	1	0	48
NNE	0	7	12	11	4	3	37
NE	0	7	7	10	0	0	24
ENE	1	11	19	8	0	0	39
E	0	10	16	8	2	0	36
ESE	1	9	14	5	0	0	29
SE	1	17	23	3	0	0	44
SSE	1	11	39	10	1	0	62
S	0	6	22	26	0	0	54
SSW	2	4	16	32	0	0	54
SW	0	9	16	7	0	0	32
WSW	0	8	10	2	0	0	20
W	0	6	16	8	0	0	30
WNW	1	5	27	7	2	0	42
NW	0	6	13	7	0	0	26
NNW	0	3	14	6	0	0	23
Variable	0	0	0	0	0	0	0
Total	7	127	286	167	10	3	600

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	2	1	0	0	7
NNE	1	0	3	9	0	0	13
NE	1	5	15	17	0	0	38
ENE	0	3	13	13	0	0	29
E	1	3	26	11	0	0	41
ESE	0	4	6	5	0	0	15
SE	2	5	7	0	0	0	14
SSE	3	4	1	0	0	0	8
S	0	4	10	1	0	0	15
SSW	0	6	5	3	0	0	14
SW	1	7	4	2	0	0	14
WSW	1	4	6	5	0	0	16
W	1	13	9	1	0	0	24
WNW	3	4	6	0	0	0	13
NW	1	2	2	3	0	0	8
NNW	1	3	1	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	16	71	116	72	0	0	275

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: July - September 2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	0	0	0	3
NNE	0	1	5	1	0	0	7
NE	1	3	7	8	0	0	19
ENE	0	11	28	13	0	0	52
E	0	3	47	9	0	0	59
ESE	1	6	12	1	0	0	20
SE	4	7	4	0	0	0	15
SSE	1	2	12	0	0	0	15
S	1	9	7	0	0	0	17
SSW	2	4	3	1	0	0	10
SW	0	4	6	6	0	0	16
WSW	0	4	4	1	0	0	9
W	0	4	3	0	0	0	7
WNW	0	0	0	0	0	0	0
NW	0	2	0	0	0	0	2
NNW	0	3	2	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	10	65	141	40	0	0	256

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	5	0	0	0	6
NNE	0	0	1	0	0	0	1
NE	0	0	3	0	0	0	3
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	0	3	0	0	0	0	3
S	0	0	4	0	0	0	4
SSW	0	3	6	0	0	0	9
SW	0	0	0	0	0	0	0
WSW	0	0	2	0	0	0	2
W	0	0	0	0	0	0	0
WNW	0	0	2	2	0	0	4
NW	0	0	3	3	0	0	6
NNW	0	3	6	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	0	11	32	5	0	0	48

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	0	0	0	2
NNE	0	2	3	0	0	0	5
NE	0	0	1	0	0	0	1
ENE	0	0	2	0	0	0	2
E	0	0	2	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	2	0	0	0	0	2
SSE	0	3	0	0	0	0	3
S	0	5	0	0	0	0	5
SSW	0	1	4	0	2	0	7
SW	0	0	3	0	0	0	3
WSW	0	2	6	0	0	0	8
W	0	0	2	1	0	0	3
WNW	1	1	4	5	0	0	11
NW	0	1	5	2	0	0	8
NNW	0	3	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	1	21	34	8	2	0	66

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	2	0	0	0	5
NNE	0	6	2	0	0	0	8
NE	0	3	3	0	0	0	6
ENE	0	0	2	0	0	0	2
E	0	2	3	0	0	0	5
ESE	0	0	0	0	0	0	0
SE	1	2	2	0	0	0	5
SSE	0	6	4	0	0	0	10
S	0	8	7	1	0	0	16
SSW	0	8	4	2	3	0	17
SW	0	2	6	3	0	0	11
WSW	0	6	4	3	0	0	13
W	0	4	5	3	0	0	12
WNW	0	2	4	7	2	0	15
NW	0	5	7	0	2	0	14
NNW	0	4	3	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	1	61	58	19	7	0	146

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	11	21	0	0	0	32
NNE	1	14	3	0	0	0	18
NE	1	21	11	1	0	0	34
ENE	3	13	9	0	0	0	25
E	0	10	16	0	0	0	26
ESE	3	15	12	0	0	0	30
SE	3	19	25	1	0	0	48
SSE	1	25	54	2	0	0	82
S	0	21	43	16	0	0	80
SSW	3	15	22	34	7	0	81
SW	2	10	27	13	0	0	52
WSW	2	12	8	7	1	0	30
W	3	9	15	10	1	0	38
WNW	2	22	56	46	6	0	132
NW	2	26	88	48	10	0	174
NNW	2	21	39	6	0	0	68
Variable	0	0	0	0	0	0	0
Total	28	264	449	184	25	0	950

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	20	7	0	0	0	29
NNE	2	8	8	2	0	0	20
NE	1	11	5	1	0	0	18
ENE	3	14	1	0	0	0	18
E	4	16	2	0	0	0	22
ESE	7	34	3	0	0	0	44
SE	4	41	12	1	0	0	58
SSE	5	36	14	1	0	0	56
S	4	32	36	3	0	0	75
SSW	3	29	39	13	0	0	84
SW	0	21	27	3	0	0	51
WSW	3	20	22	1	0	0	46
W	0	17	13	2	0	0	32
WNW	1	34	34	0	0	0	69
NW	3	28	10	1	0	0	42
NNW	1	22	3	0	0	0	26
Variable	0	0	0	0	0	0	0
Total	43	383	236	28	0	0	690

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	9	0	0	0	0	12
NNE	1	8	0	0	0	0	9
NE	0	9	0	0	0	0	9
ENE	1	2	0	0	0	0	3
E	2	4	0	0	0	0	6
ESE	6	2	0	0	0	0	8
SE	3	0	0	0	0	0	3
SSE	2	13	0	0	0	0	15
S	2	15	0	0	0	0	17
SSW	2	22	1	0	0	0	25
SW	2	3	2	0	0	0	7
WSW	6	8	1	0	0	0	15
W	1	2	1	0	0	0	4
WNW	0	5	0	0	0	0	5
NW	5	12	1	0	0	0	18
NNW	4	7	0	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	40	121	6	0	0	0	167

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 10 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	0	0	0	0	0	4
NNE	4	1	0	0	0	0	5
NE	12	10	0	0	0	0	22
ENE	5	1	0	0	0	0	6
E	1	0	0	0	0	0	1
ESE	4	0	0	0	0	0	4
SE	1	1	0	0	0	0	2
SSE	2	1	0	0	0	0	3
S	6	2	0	0	0	0	8
SSW	7	9	0	0	0	0	16
SW	5	3	0	0	0	0	8
WSW	4	0	0	0	0	0	4
W	4	0	0	0	0	0	4
WNW	12	0	0	0	0	0	12
NW	18	9	0	0	0	0	27
NNW	7	1	0	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	96	38	0	0	0	0	134

Hours of calm in this stability class: 7
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Extremely Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	1	1	0	2
NNE	0	0	0	1	0	0	1
NE	0	0	0	2	0	0	2
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	3	0	0	0	3
SSE	0	0	1	0	0	0	1
S	0	0	8	2	1	0	11
SSW	0	0	2	0	0	0	2
SW	0	0	0	2	0	0	2
WSW	0	0	0	0	0	0	0
W	0	0	0	0	1	0	1
WNW	0	0	0	2	2	0	4
NW	0	0	4	2	1	0	7
NNW	0	0	5	7	0	0	12
Variable	0	0	0	0	0	0	0
Total	0	0	23	19	6	0	48

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Moderately Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	1	0	0	3
NNE	0	1	0	3	0	0	4
NE	0	0	0	0	0	0	0
ENE	0	0	0	2	0	0	2
E	0	0	0	2	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	4	0	0	0	4
SSE	0	0	2	0	0	0	2
S	0	4	3	1	1	0	9
SSW	0	0	0	0	0	2	2
SW	0	1	6	2	0	0	9
WSW	0	0	2	0	0	0	2
W	0	0	0	4	1	0	5
WNW	0	2	1	6	1	1	11
NW	0	0	3	2	2	0	7
NNW	0	0	3	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	9	25	24	5	3	66

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Slightly Unstable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	3	1	0	0	7
NNE	0	1	4	1	0	0	6
NE	0	0	4	1	0	0	5
ENE	0	0	0	3	0	0	3
E	0	0	2	2	0	0	4
ESE	0	0	0	0	0	0	0
SE	1	0	3	2	0	0	6
SSE	0	5	2	7	0	0	14
S	0	11	3	5	2	0	21
SSW	0	2	1	5	0	4	12
SW	0	3	5	2	4	0	14
WSW	0	3	4	3	1	0	11
W	0	1	2	3	2	0	8
WNW	1	2	3	2	6	4	18
NW	0	3	3	6	0	0	12
NNW	0	2	1	2	0	0	5
Variable	0	0	0	0	0	0	0
Total	2	36	40	45	15	8	146

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Neutral - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	9	10	0	0	21
NNE	0	6	11	4	1	0	22
NE	0	5	14	6	0	0	25
ENE	1	2	14	8	5	0	30
E	0	0	6	18	4	0	28
ESE	1	5	12	17	0	0	35
SE	2	5	26	40	3	0	76
SSE	2	3	16	36	17	3	77
S	0	9	8	21	35	21	94
SSW	0	8	14	23	10	4	59
SW	1	7	10	8	10	0	36
WSW	0	6	8	10	6	3	33
W	1	11	10	16	18	4	60
WNW	0	7	28	79	45	18	177
NW	1	7	23	57	22	13	123
NNW	0	6	16	29	3	0	54
Variable	0	0	0	0	0	0	0
Total	9	89	225	382	179	66	950

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Slightly Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	6	15	0	0	22
NNE	0	1	6	10	2	0	19
NE	0	0	4	11	2	0	17
ENE	0	3	6	8	0	0	17
E	0	1	9	11	1	0	22
ESE	0	1	18	26	3	0	48
SE	0	10	37	12	5	1	65
SSE	0	5	31	30	9	1	76
S	1	3	19	30	32	9	94
SSW	0	1	17	25	12	0	55
SW	0	0	18	16	14	0	48
WSW	0	3	6	15	4	1	29
W	0	0	19	22	1	0	42
WNW	1	2	23	35	7	0	68
NW	0	3	18	11	3	0	35
NNW	0	1	16	16	0	0	33
Variable	0	0	0	0	0	0	0
Total	2	35	253	293	95	12	690

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Moderately Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	11	5	0	0	16
NNE	0	1	1	10	0	0	12
NE	0	0	1	4	0	0	5
ENE	0	0	1	4	0	0	5
E	0	0	3	1	0	0	4
ESE	0	0	1	3	0	0	4
SE	1	1	1	1	0	0	4
SSE	0	1	6	8	0	0	15
S	0	1	11	8	0	0	20
SSW	0	1	4	18	1	0	24
SW	0	2	6	3	0	0	11
WSW	0	0	4	7	0	0	11
W	1	1	6	4	0	0	12
WNW	0	0	0	3	0	0	3
NW	1	1	3	5	0	0	10
NNW	0	0	8	3	0	0	11
Variable	0	0	0	0	0	0	0
Total	3	9	67	87	1	0	167

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Attachment 3, Meteorological Data

Clinton Power Station

Period of Record: October - December2024
Stability Class - Extremely Stable - 60m-10m Delta-T (F)
Winds Measured at 60 Meters

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	8	2	0	0	11
NNE	0	6	4	1	0	0	11
NE	0	3	2	1	0	0	6
ENE	0	0	3	6	0	0	9
E	0	2	5	0	0	0	7
ESE	0	3	3	1	0	0	7
SE	0	2	1	0	0	0	3
SSE	0	1	5	0	0	0	6
S	0	0	5	0	0	0	5
SSW	0	5	9	7	0	0	21
SW	0	2	6	9	0	0	17
WSW	1	0	3	1	0	0	5
W	0	3	4	0	0	0	7
WNW	1	0	9	0	0	0	10
NW	0	2	1	0	0	0	3
NNW	0	1	12	0	0	0	13
Variable	0	0	0	0	0	0	0
Total	2	31	80	28	0	0	141

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0