



To: Williston H Solar, LLC

Date: November 3, 2025

Memorandum

Project #: 58972.08

From: Stephanie Wyman, PE, Civil Engineer

Re: Section 248 Waste Disposal, Soil Erosion Technical
Memorandum

Introduction

On behalf of Williston H Solar, LLC ("Petitioner") and at the request of Encore Renewable Energy ("Encore"), VHB has prepared this technical memorandum in support of the proposed solar electric generation facility ("Project") that will occupy approximately 11.6 acres of land within a 440-acre parcel owned by GlobalFoundries. The Project site is located off Redmond Road, northeast of Chip Aly, in Williston, Vermont. The content of this technical memorandum presents the results of an assessment of the Project as it relates to the following criteria under 30 V.S.A. § 248(b)(5), which are given due consideration by the Vermont Public Utility Commission ("PUC") in its review of Williston H Solar's request for a Certificate of Public Good ("CPG"):

- Waste Disposal (Section 248(b)(5) / 10 V.S.A. § 6086(a)(1)(B))
- Soil Erosion (Section 248(b)(5) / 10 V.S.A. § 6086(a)(4))

Project Description

The Project consists of the installation and operation of a solar electric generation facility within the GlobalFoundries campus. GlobalFoundries Power LLC ("GF Power") is an owned subsidiary of GlobalFoundries and operates as a public service company. The Project area was selected and designed after considering several site constraints – including topography, environmental resources, and aesthetic impacts – while maximizing the potential energy generation benefits. The Project will consist of a solar electric generation facility, capable of generating up to 2.75 Megawatt ("MW") AC. The approximately 11.6-acre fenced in Project will be located primarily within an existing field generally sloping from south to north (refer to **Exhibit WHS-JC-2**). Please see the detailed project description in the prefiled testimony of Jake Clark.

Section 248 Criteria Reviewed

Waste Disposal (10 V.S.A. § 6086(a)(1)(B))

The Waste Disposal criterion incorporated into Section 248 review provides that the Project must meet applicable health and Vermont Department of Environmental Conservation ("DEC") regulations regarding the disposal of waste and must not involve the injection of waste materials into groundwater or wells. For the Project, VHB's consideration of waste disposal involves sanitary wastewater, stormwater runoff, and general construction waste including tree and brush debris. VHB's consideration of the injection of waste materials into groundwater or wells also involves the Project's storage of transformer oil and the potential for a leak or release.

The Project will not need permanent sanitary waste treatment, will not require on-site sanitary waste treatment or use of public waste treatment facilities and will not involve any on-site waste disposal or the injection of waste materials or any harmful or toxic substances into groundwater or wells.

The Project will generate minor amounts of scrap and waste material during installation, and this waste will be disposed of or recycled at an approved disposal facility in accordance with Vermont Solid Waste Management Rules and Procedures (DEC 2020) or other applicable regulations. Construction waste generated during construction, such as office trash from the contractor's operations, or from portable toilets, will be the responsibility of the contractor to dispose of properly. The Project is not anticipated to generate wastes during operation.

Approximately 4.2 acres of tree clearing will be necessary to install the northeast and southwest areas of the array, install the perimeter fence, and to provide access improvements to the site. Approximately 1.5 acres of tree trimming will be necessary to minimize shade impacts on the array and to facilitate overhead wires to the point of interconnection. Woody debris generated from tree clearing will be sold for lumber if merchantable, offered as firewood to nearby landowners, or chipped and hauled to an approved disposal site.

Operational-phase stormwater discharge permit authorization from DEC is required for discharges of regulated stormwater runoff to waters of the State from new development or redevelopment, of a half-acre of impervious surface, and/or expansion of existing development that results in at least one-acre of impervious surface. The Project parcel contains more than one-acre of existing impervious surface; therefore, the Project is required to permit and treat all new impervious surfaces. The majority of the GlobalFoundries Campus has coverage under a National Pollutant Discharge Elimination System ("NPDES") Permit 3-1295. The Project parcel in this vicinity, however, does not have coverage under the NPDES permit, thus coverage under a new Vermont General Permit 3-9050 will be required.

The Project involves the installation and use of one pad-mounted transformer, sized at 2,750 kVA in the central area of the array as shown on the Project Site plans included in the petition materials. This transformer will contain approximately 670 gallons of non-hazardous vegetable-based dielectric fluid (FR3 or similar)¹. The Project does not trigger the need to prepare a Spill Prevention Control and Countermeasure ("SPCC") plan under 40 C.F.R. § 112 ("SPCC Regulations"), because the total volume of oil storage capacity at the Project Site will not exceed 1,320 gallons. Although not subject to SPCC Regulations, the transformer will be placed within a secondary containment structure to prevent the release of transformer oil to the environment. If, at the time of construction, total oil volume capacity exceeds 1,320 gallons and requires the Project to prepare an SPCC plan, one will be prepared.

Though secondary containment will be constructed to prevent the release of oil to the environment, VHB evaluated the location of the fluid-filled transformers with respect to sensitive receptors near the Project. According to the Agency of Natural Resources ("ANR") Natural Resources Atlas, there are no surface water or groundwater protection areas within the vicinity of the Project. ANR-mapped private water supply wells are located in the vicinity of the Project area. One well is mapped as being located within the Project footprint; however, field studies completed by VHB have not located the well as mapped or within the Project area. VHB anticipates that the ANR mapped wells in this area are or were associated with the buildings to the southwest and the mapping is inaccurate. The proposed transformer is not located within wetlands, wetland buffers, streams, or stream buffers. The distance from sensitive receptors and proposed secondary containment structure will prevent the unlikely release of oil to waters of the U.S. or other sensitive receptors. Furthermore, the transformer fluid will be non-hazardous. Accordingly, VHB believes that the proposed transformer does not pose a potential for adverse impacts to sensitive receptors.

¹ Only containers with oil storage capacities equal to or greater than 55 gallons count toward the total oil volume with respect to the SPCC Regulations.

As indicated above, the Project will meet applicable health and DEC regulations regarding the disposal of waste that have been considered and does not involve the injection of waste materials into groundwater or wells. Therefore, the Project will comply with this criterion.

Soil Erosion (10 V.S.A. § 6086(a)(4))

Act 250 Criterion 4, which is to be accorded due consideration as part of Section 248, requires a finding that the Project “will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.” (10 V.S.A. § 6086(a)(4)). Compliance with this criterion involves two considerations: (1) preventing soil erosion, and (2) preventing a reduction in the land’s capacity to hold water.

According to the Natural Resources Conservation Service (“NRCS”) soils report, underlying soils within the Project Site are described in the table below:

Table 1 Soil Classifications Within Project Site

Soil Classification	K-Value	Hydrologic Soil Group ²
Adams and Windsor loamy sands, 0 to 5 percent slopes	0.10	A
Adam and Windsor loamy sands, 12 to 30 percent slopes	0.20	A
Agawam fine sandy loam, 12 to 30 percent slopes	0.20	A
Duane and Deerfield soils, 12 to 20 percent slopes	0.20	A/D
Hartland very fine sandy loam, 25 to 60 percent slopes	0.32	B
Munson and Raynham silt loam, 6 to 12 percent slopes	0.49	C/D

Erodibility ratings (or “K-values”) indicate the susceptibility of soil to erosion by water. Values typically range from 0.02 to 0.69, with higher values more susceptible to erosion. Soils with K-values that are greater than 0.17 but less than 0.36 are generally considered to have a moderate risk of erodibility per the Vermont Standards and Specifications for Erosion Prevention and Sediment Control. The soils underlying the Project are primarily low to moderate risk of susceptibility to erosion. Therefore, the Project is considered to have a low-to-moderate risk of soil erosion. Any risks related to potential soil erodibility are intended to be managed via implementation of a site-specific Erosion Prevention and Sediment Control (“EPSC”) plan.

Hydrologic soil groups (“HSG”) established by the NRCS are based on estimates of runoff potential, with four classifications (A, B, C, and D) based on their rate of water infiltration under certain conditions, with HSG A having the least runoff potential and HSG D having the greatest runoff potential. The Project Site is primarily underlain by HSG A soils indicating a lower potential for runoff. There are also small areas of HSG B, C, and D soils within the project site, somewhat increasing the potential for runoff. Regardless, implementation of the EPSC plan will take these site-specific factors into consideration to reduce potential for runoff.

For Project construction, direct earth disturbance is necessary for the access road construction and drainage, installation of transformer pad and secondary containment system, tree clearing/grubbing, underground electric lines, and use of

² Soils that can be adequately drained are assigned to dual hydrologic soil groups (A/D, B/D, and C/D) based on their saturated hydraulic conductivity and the water table depth when drained. The first letter applies to the drained condition and the second to the undrained condition. For the purpose of hydrologic soil group, adequately drained means that the seasonal high-water table is kept at least 60 centimeters [24 inches] below the surface in a soil where it would be higher in a natural state (USDA NRCS 2007).

a temporary staging area. Other areas within the array have the potential to be indirectly disturbed by equipment during constructions. The total area of potential disturbance within the project limits of disturbance is approximately 15.1 acres.

Soil disturbance for Project construction will total more than one acre (approximately 15.1 acres). Therefore, the Petitioner will be required to obtain a DEC construction stormwater discharge General Permit 3-9020. The Project will implement EPSC Best Management Practices ("BMPs") to minimize soil erosion and reduce the potential for sediment-laden runoff to reach receiving waters. The installation and maintenance of BMPs will prevent any undue soil erosion from all areas of earth disturbance. BMPs that will be implemented as part of the Project include, but are not necessarily limited to, a stabilized construction entrance to minimize tracking of soil by vehicles, demarcation of disturbed areas with barrier tape, installing straw wattles throughout the array to break up flow paths to minimize the potential of erosion and perimeter controls such as silt fence.

Based on evaluation of the proposed Project, it is VHB's opinion that the Project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition results.

References:

Argentine, C.C. 2008. *Vermont Act 250 Handbook*. Putney Press, Brattleboro, VT.

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ANR, 2017. Environmental Protection Rule, 2017 Vermont Stormwater Management Rule and the Agency's Design Guidance, Chapter 36, effective July 1, 2017

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DEC. 2019. Stormwater Management Rule - Stormwater for Unimpaired Water: Available:
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Williston H Solar, LLC
Ref: 58972.08
November 3, 2025
Page 5



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