

Case ID - Case Name: 19-1823-EL-BGN - Big Plain Solar
Company Name: Big Plain Solar, LLC
Amendment(s): 21-1196-EL-BGA
Related Case(s): 21-1174-EL-BLN
Case Status: Under Construction
Certificate Approved Date: March 18, 2021
Construction Start Date: March 10, 2022
Case Type: Solar Generation
Capacity, Acreage: 196.0 MW, 2438 acres
County(s): Madison
Township(s): Fairfield, Oak Run
Report Number: CI23-19-1823-001R3

Background

On March 18, 2021, the Ohio Power Siting Board (Board) issued a Certificate of Environmental Compatibility and Public Need (Certificate) to Big Plain Solar, LLC (Big Plain or Certificate Holder) in Case No. 19-1823-EL-BGN for the construction, operation, and maintenance of a 196 megawatt (MW) solar-powered electric generation facility (Project), subject to the conditions set forth in the Stipulation and consistent with the Opinion, Order, and Certificate. Of the 2,438 acres leased, Big Plain's footprint occupies 1,168 of those acres located in Fairfield and Oak Run townships in Madison County. The project is currently owned and operated by Leeward Renewable Energy Development, LLC (Leeward). The general contractor onsite is SOLV Energy (SOLV). Construction began on March 10, 2022, and is still ongoing, as of the date of this report. Case No. 21-1174-EL-BGN is an OPSB approved related case, in which Big Plain will construct a transmission facility as infrastructure to carry electricity from the facility to the grid. This infrastructure is not the subject of this compliance inquiry report.

Summary

On August 18, 2023, in their weekly report, Big Plain notified Staff that construction would be ending the middle of September. At the time, Staff was still working with Big Plain to receive weekly reports of an appropriate quality and timely delivery. Concerned with the remediation of outstanding items prior to SOLV vacating the project, Staff organized a meeting with the County Engineer, County representatives, DLZ Consultants (DLZ), and the Ohio EPA. During this meeting, several outstanding items were identified. Therefore, Staff executed a site inspection with the Madison County Engineer, DLZ, SOLV, and Leeward on August 31, 2023. Staff evaluated the critical items listed in the last report. Further, Staff acknowledged noticeable construction improvements such as waste management efforts. As a result of the inspection, Staff came up with an updated list of critical items and key areas. The critical items are as follows:

1. Impounded Water
2. Vegetation Management
3. Staffing Level

Critical item observations

Impounded water

On August 31, 2023, Staff observed less impounded water than in previous inspections. However, vegetative growth prevented accurate assessment of some known inundated areas. Key areas 1 and 5 appear to be dry and draining properly. Other key areas, as in previous inspections, were still either inundated where none was expected or deeper and more widespread than the predictions of the Flood

Depth Plan from the Final Engineering Drawings filed to the PUCO public docket. Inundated areas are indicated on the attached map as key areas 2, 3, 4, and 7, and cover an estimated 1.5% to 2.5% of the project area.

Key area 5 has a hickenbottom installed, though it is not known if the field tile it is tied into is negatively impacting drainage on the neighboring property.

Staff observed improperly installed culverts at key areas 1, 4, and 5. Some culvert inlets are not installed at grade, thus not functioning properly to drain impounded water.

Staff witnessed repairs to a drain tile underway at the first temporary sediment basin north of Big Plain-Circleville Road. While observing the excavation, the County Engineer stated he has not witnessed any gravel pipe bedding laid in any of the drain tile excavations nor any kind of elevation measuring equipment. Additionally, DLZ expressed concern with equipment driving over the fresh backfill stating the compaction could cause the single wall drain tile to be crushed. DLZ also mentioned non-conventional methods of joining pipe together were being utilized rather than using manufactured reducers and couplings. Staff reviewed photographs submitted in the weekly reports which corroborate these claims. In the excavation visited during the inspection, Staff witnessed the installation of smaller diameter tile installed downstream of larger diameter tile. Live Action is the subcontractor SOLV hired to coordinate drain tile repair.

Vegetation management

On August 31, 2023, Staff observed that the vegetation in the large panel block north of Big Plain-Circleville Road is in excess of 36 inches high with many mature weeds. Staff observed successful management efforts in two of the panel blocks south of Big Plain-Circleville Road. Sol Tek is the contractor SOLV has hired to manage the vegetation. Sol Tek's onsite representative stated with current staffing approximately 10 acres a day is being mowed. However, Staff has estimated that 70% (817 acres) of the project still needs mowed before the conclusion of construction.

Staffing Level

On August 31, 2023, Staff observed a concerning lack of site activity given the amount of work left to complete. The weather was sunny and site conditions favorable for work. However, Staff witnessed no construction activity in key areas 2, 3, and 4. Staff did not witness any mowing or grading activities, however, Staff did witness an idle hydro excavation crew on the location of a drain tile repair. SOLV indicated they are having difficulty increasing staffing levels.

Other observations

Construction waste disposal

On August 31, 2023, Staff observed no appreciable amount of fugitive micro-trash (e.g., water bottles, small debris). Larger waste items were of a lesser quantity than previous inspections and generally stacked and organized in appropriate areas.

Excessive Rutting

On August 31, 2023, Big Plain demonstrated in the panel blocks south of Big Plain-Circleville Road that adequate rut mitigation and revegetation had occurred. In the large block of panels north of Big Plain-Circleville Road, a quantitative assessment of how much work remains is impractical at this time due to the height of the vegetation. However, Staff assumes extensive work remains due to observations from previous inspections.

Excessive rutting has caused topsoil and subsoil to intermingle onsite, which there is no immediate remedy for. However, the other concerns with rutting are impacts to operating and maintaining the site. Due to the condition of the blocks of panels south of Big Plain-Circleville Road, Staff expects the remaining areas in need of rutting mitigation to be adequately remedied in the future. Though this item will continue to be monitored, Staff does not require a response to this item at this time.

Recommendations

Impounded Water

Staff recommends ongoing drain tile repair, culvert improvements, and grading height adjustments so the site, when complete, drains in a manner conducive to maintenance during operation and farming upon decommissioning. Staff recommends Big Plain prioritize the remediation of key areas 2, 3, 4, and 7 labeled on the attached map.

Staff recommends the continued weekly submission of drain tile repair documentation. Staff requests a halt to the non-conventional installation methods detailed in the observations above, and requests best management practices for drain tile installation be utilized moving forward.

Staff requests an inventory of culverts which require installation, repair, or adjustment be included in the weekly report along with a timeline for remediation. Furthermore, Staff requests that proper best management practices for culvert improvements be utilized moving forward.

Vegetation Management

Staff requests continued updates to the weekly report include the approximate weekly production and an estimated date for completion of this critical item. Additionally, Staff recommends removing the self-imposed 50-foot buffers surrounding wetlands and mowing those areas as well.

Staffing Level

Staff requests the weekly report include quantitative data demonstrating the needed staffing levels to meet Big Plain's remaining construction objectives.

If Staff does not identify satisfactory progress for all three critical items by October 5, 2023, Compliance Staff will reengage senior level management Staff for alternative suggestions moving forward. This could include but would not be limited to increased on-site monitoring and filing weekly compliance reports to the case docket.

Eric Morrison

Public Utilities Commission of Ohio
Power Siting Department
Field Compliance Investigator

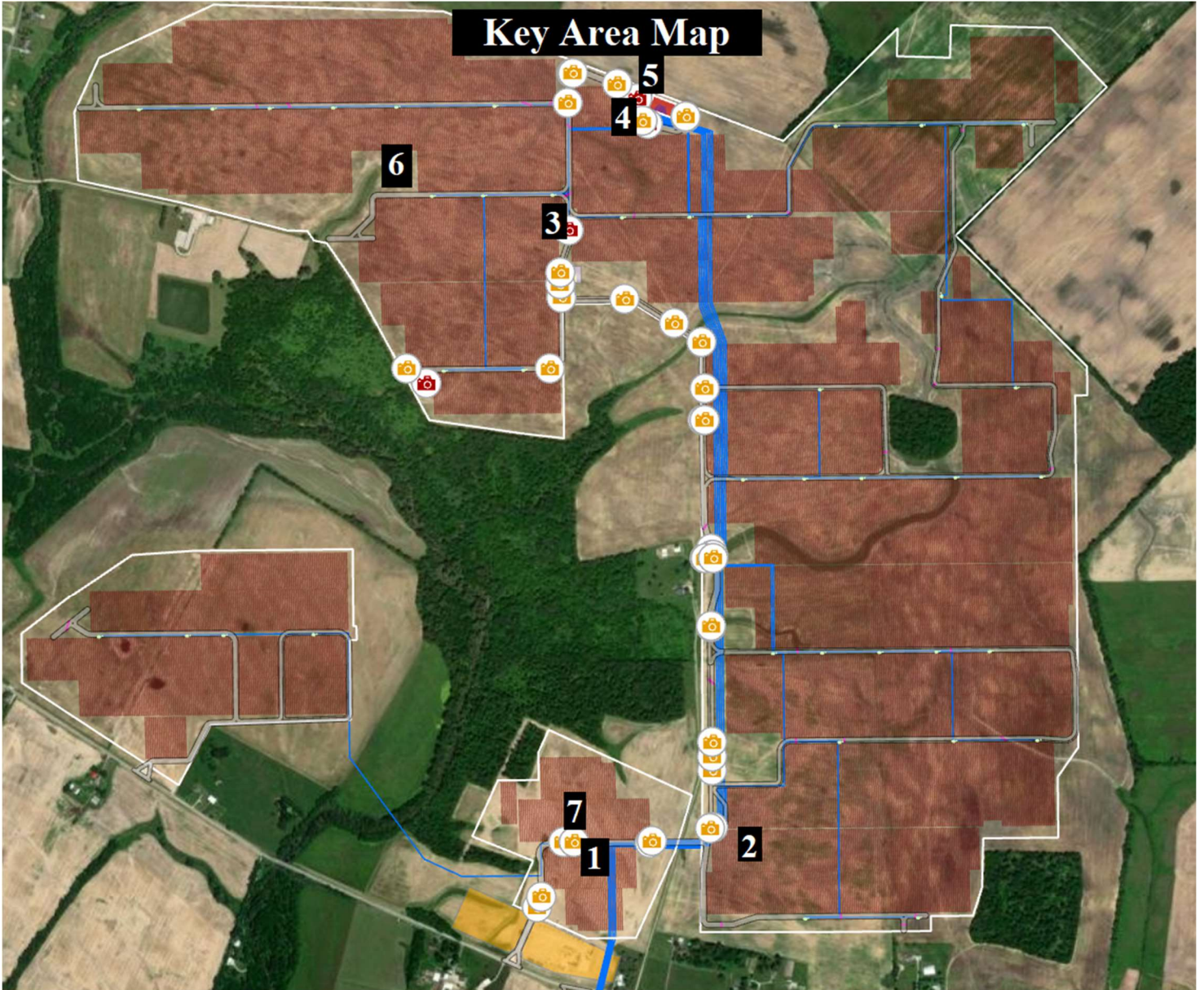
Attachment(s)

Key Area Map

CC:

Bryan Dhume, Madison County Engineer
Marshall Cooper, Ohio EPA
Michael Settineri, Vorys
Matt Pellinen, Leeward Renewable Energy
John Jones, Ohio Attorney General's Office
Matthew Sandor, Attorney Examiner
Patricia Schabo, Attorney Examiner
Jessie Klemme, SOLV Energy

Key Area Map



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Case No(s). 19-1823-EL-BGN

Summary: Report containing Staff's third interim report filed in regard to Big Plain Solar compliance inquiry CI23-19-1823-001 electronically filed by Eric R. Morrison on behalf of OPSB Staff.