



Grand Tower Energy Center Closed CCR Impoundment Quarterly Inspection Form

Date	<u>11/28/22</u>
Time	<u>1100-1300</u>
Name	<u>Matt Halley</u> (Inspector)

Weather:

Temperature:

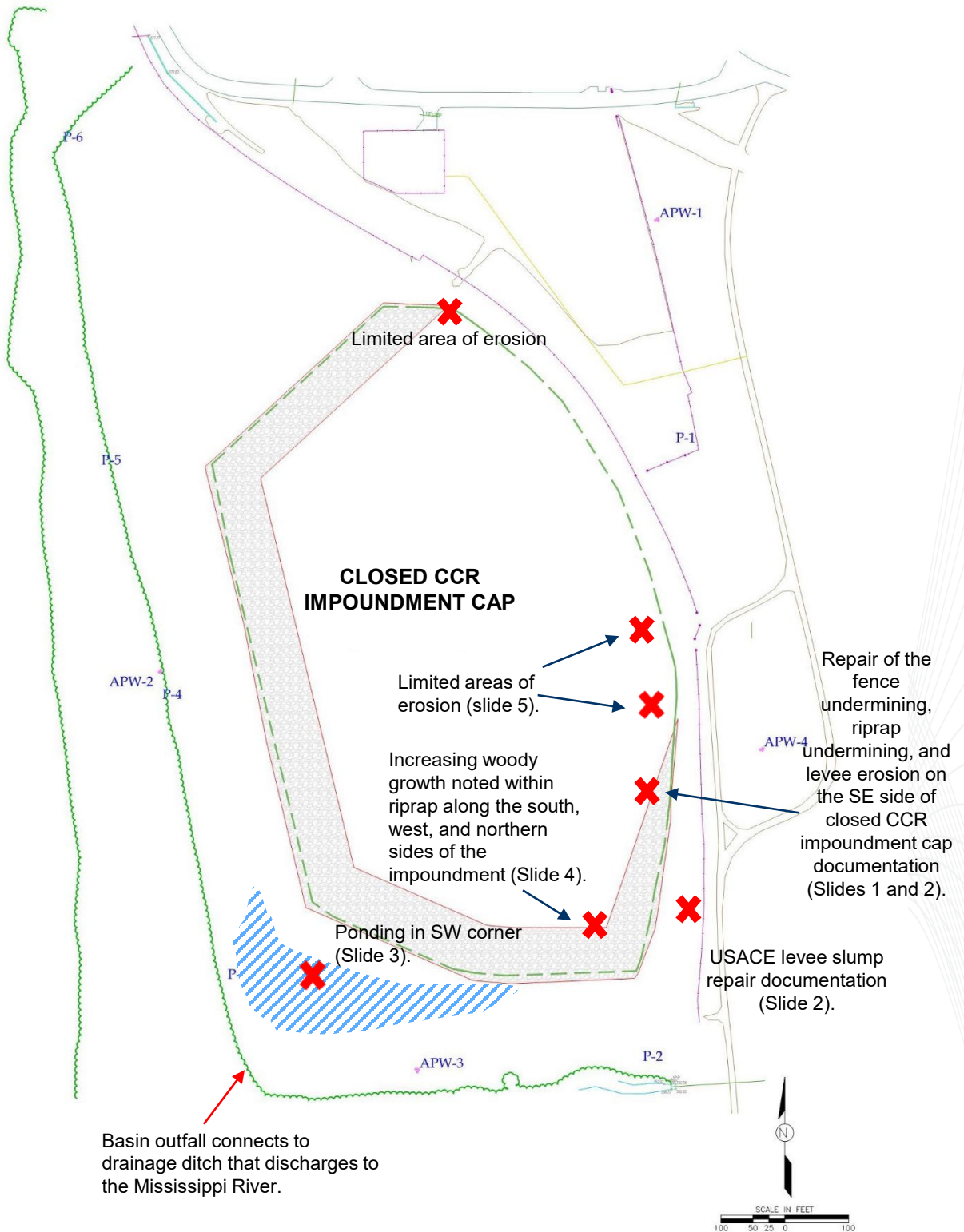
50 deg. F Sunny Cloudy Raining Other
_____**Observations:** Erosion / Gullies Cracking / Sloughing Ponding / Damp Areas No Problems Identified Woody Vegetation Growth Other

_____**Conditions Limiting Visibility:** Snow Cover Vegetation None Other
_____**Observations in Detail Below:**

- ERM onsite for the Q4 impoundment inspection and groundwater sampling event.
- Repair of the U.S. Army Corps of Engineers (USACE) Levee to address slumping of the levee face was documented (see figure and photos).
- Repairs of the erosion and fence undermining on the east/SE side was documented (see figure and photos).
- Post-repair erosion control measures (straw matting) on USACE levee has partially become detached.
- Limited erosion noted on eastern and northern CCR impoundment cap faces up to 9" deep.
- Growth of a limited but increasing amount of woody vegetation (up to 1" diameter) within the riprap on the north, west, and southern impoundment cap faces was observed.
- Ponding noted in SW corner of the basin.
- Impoundment cap was mowed during Q3 of 2022 and found to be in generally good condition.
- Inspector recommends removal of woody growth, repair of erosional channels, and re-installing straw matting.

Please see observation locations on figure on the following page.

Observation Locations Map



Grand Tower Energy Center Q4 2022 Closed CCR Impoundment Cap Inspection

Repairs to the Fence Undermining, Riprap Undermining, and Levee Erosion on the SE Side of Closed CCR Impoundment Cap



Facing south along the repaired fenceline and levee area.
Note: straw matting from repaired levee face has become partially detached and deposited at the bottom of the slope.

Repairs to the Fence Undermining, Riprap Undermining, and Levee Erosion on the SE Side of Closed CCR Impoundment Cap



Facing north towards impoundment cap – repairs of fence undermining, riprap undermining, and United States Army Corps of Engineers (USACE) levee section are visible.



Facing northeast towards repaired section of USACE levee.

Ponding in the SW Corner of Site



Ponded area in southwest corner of site as viewed from mowed impoundment cap.

Note: Mississippi River backwater enters the GTEC CCR Impoundment Basin when the river level gage operated by the U.S. Army Corps of Engineers gage at Grand Tower, IL reaches a stage of approximately 27 ft.

Woody Growth Observations

Southern face of impoundment cap with woody growth (up to 1" diameter) within riprap. Increasing woody growth found within riprap along south, west, and northern sides of the impoundment.



Erosional Channel Observations



Erosional channel up to 9" deep. Facing east from center-east side of impoundment cap.



Erosional channel up to 9" deep. Facing east on southeast side of impoundment cap.