



Grand Tower Energy Center Closed CCR Impoundment Quarterly Inspection Form

Date	<u>03/03/2023</u>
Time	<u>1000-1200</u>
Name	<u>Matt Halley</u> (Inspector)

Weather:

Temperature:

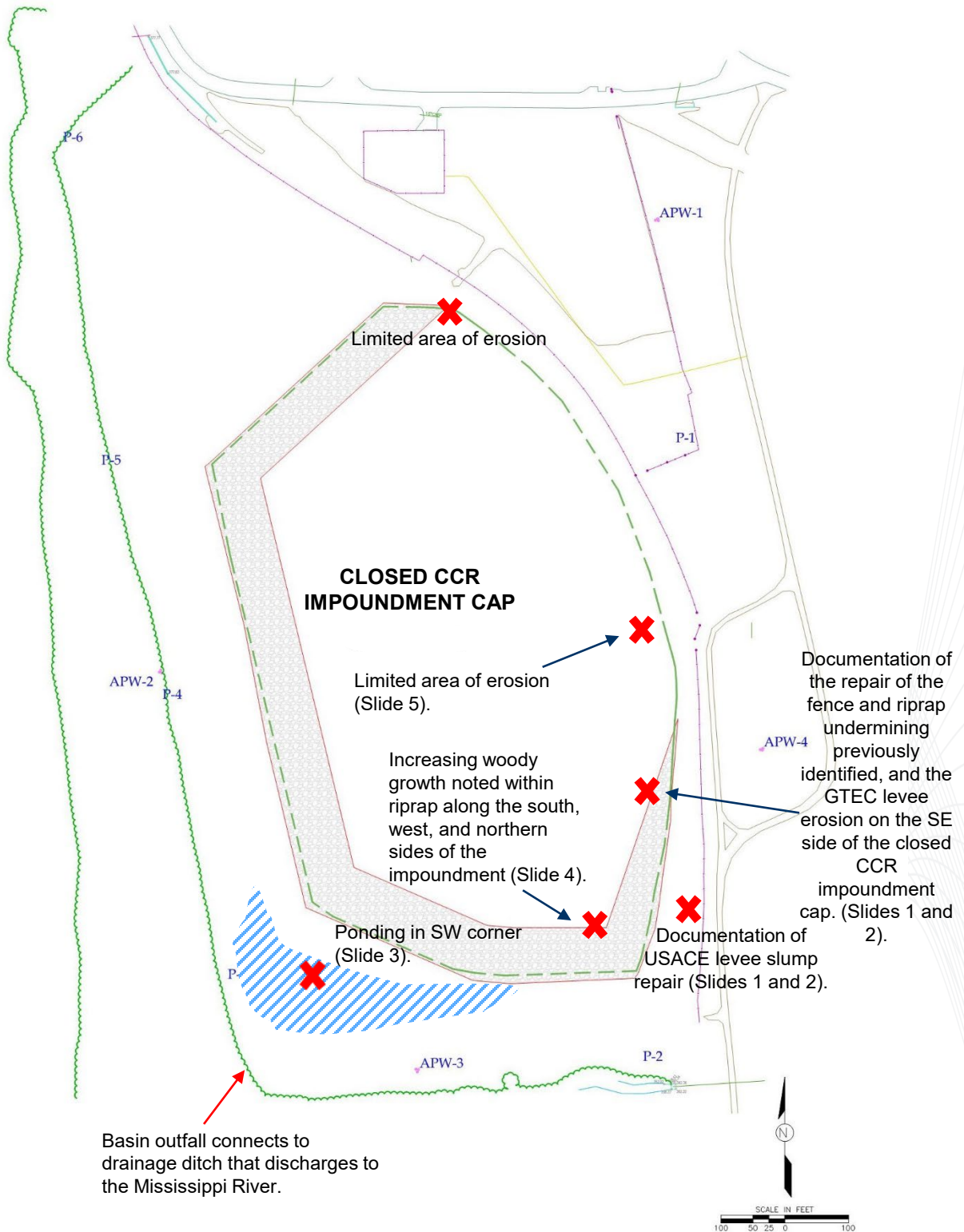
45 F Sunny Cloudy Raining Other
_____**Observations:** Erosion / Gullies Cracking / Sloughing Ponding / Damp Areas No Problems Identified Woody Vegetation Growth Other

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

- ERM onsite for the Q1 inspection of the closed CCR impoundment and groundwater sampling event.
- Completed repairs to the U.S. Army Corps of Engineers (USACE) Levee by Grand Tower Energy Center (GTEC) continues to be documented by ERM (see figure and photos).
- Completed repairs to the fence undermining on the east/SE side documented (see figure and photos).
- Post-repair erosion control measures (straw matting) on USACE levee has partially become detached.
- Erosion noted across north, west, and southern CCR impoundment cap faces up to 9" deep.
- Growth of a limited but increased 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 near the outfall.
- Inspector recommends removal of woody growth, repair of erosional channels, and re-installing straw matting on the USACE levee repair area.

Please see observation locations on figure on the following page.

Observation Locations Map



Grand Tower Energy Center Q1 2023 Closed CCR Impoundment Cap Inspection - 3 March 2023

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



Facing east towards the repaired Grand Tower Energy Center (GTEC) and United States Army Corps of Engineers (USACE) 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 and Riprap Undermining, and Levee erosion on the SE Side of Closed CCR Impoundment Cap



Facing north towards impoundment cap – repairs of fence and riprap undermining, and USACE levee section are visible.



Facing northeast towards repaired section of USACE levee.

Ponding in the SW Corner of Site Basin Near the Outfall



Ponded area in southwest corner of site as viewed from 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. Increased woody growth since the third quarter 2022 found within riprap along south, west, and northern sides of the impoundment.

Erosional Channel Observations



Facing south on east side of impoundment cap.