

# Subsequent License Renewal: Dresden Nuclear Power Station

Environmental Report  
Pre-Application Meeting

June 27, 2023

# Agenda

- Opening Remarks/Introductions
- Background
- Discussion Items
- Lessons Learned
- Closing Remarks

# Introductions

## Speakers

*Chris Wilson* – Director License Renewal

*Allison Stalker* – License Renewal Environmental Lead

## Participants

*Iba Ello-Fletcher* – Licensing Lead

*Don MacLeod* – Senior Engineer (Jensen Hughes)

*Stacy Burgess* – Senior Project Manager (ENERCON)

*Rachel Turney-Work* – Environmental Licensing Manager (ENERCON)

# Background

## Dresden Nuclear Power Station

- Units 2 and 3 are both General Electric Type 3 Boiling Water Reactor (Unit 1 retired)
- Current rated core thermal power: 2,957 MWt each
- Designed to operate at a gross electrical power output of 1003 MWe for each unit.
- Capital improvements include a 2001 power uprate (implemented 2002)
- No refurbishment anticipated for subsequent period of extended operation (SPEO)

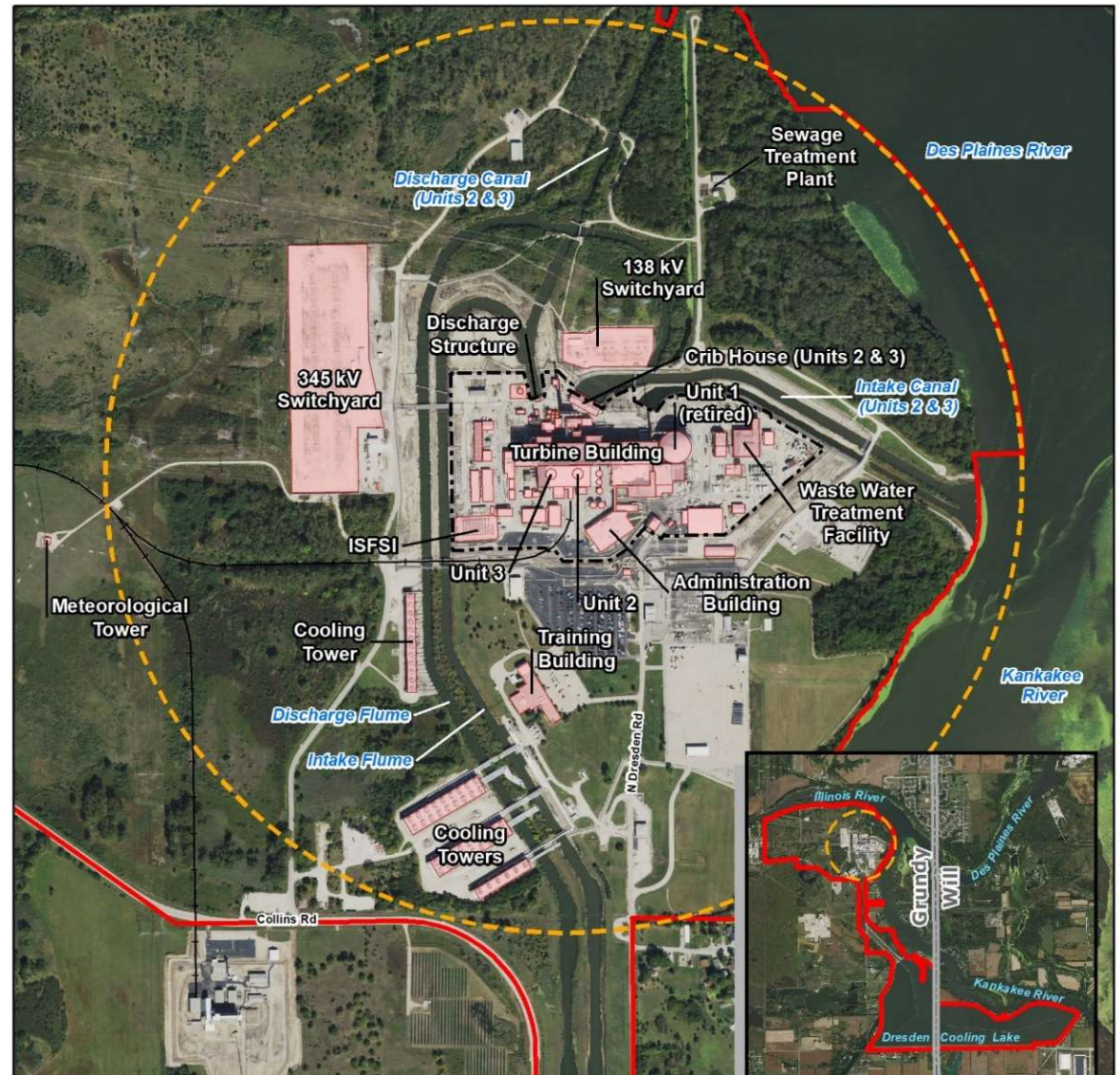


	OL	Renewed license	Current license	SLR
Unit 2	1991	2004	2029	2049
Unit 3	1971	2004	2031	2051



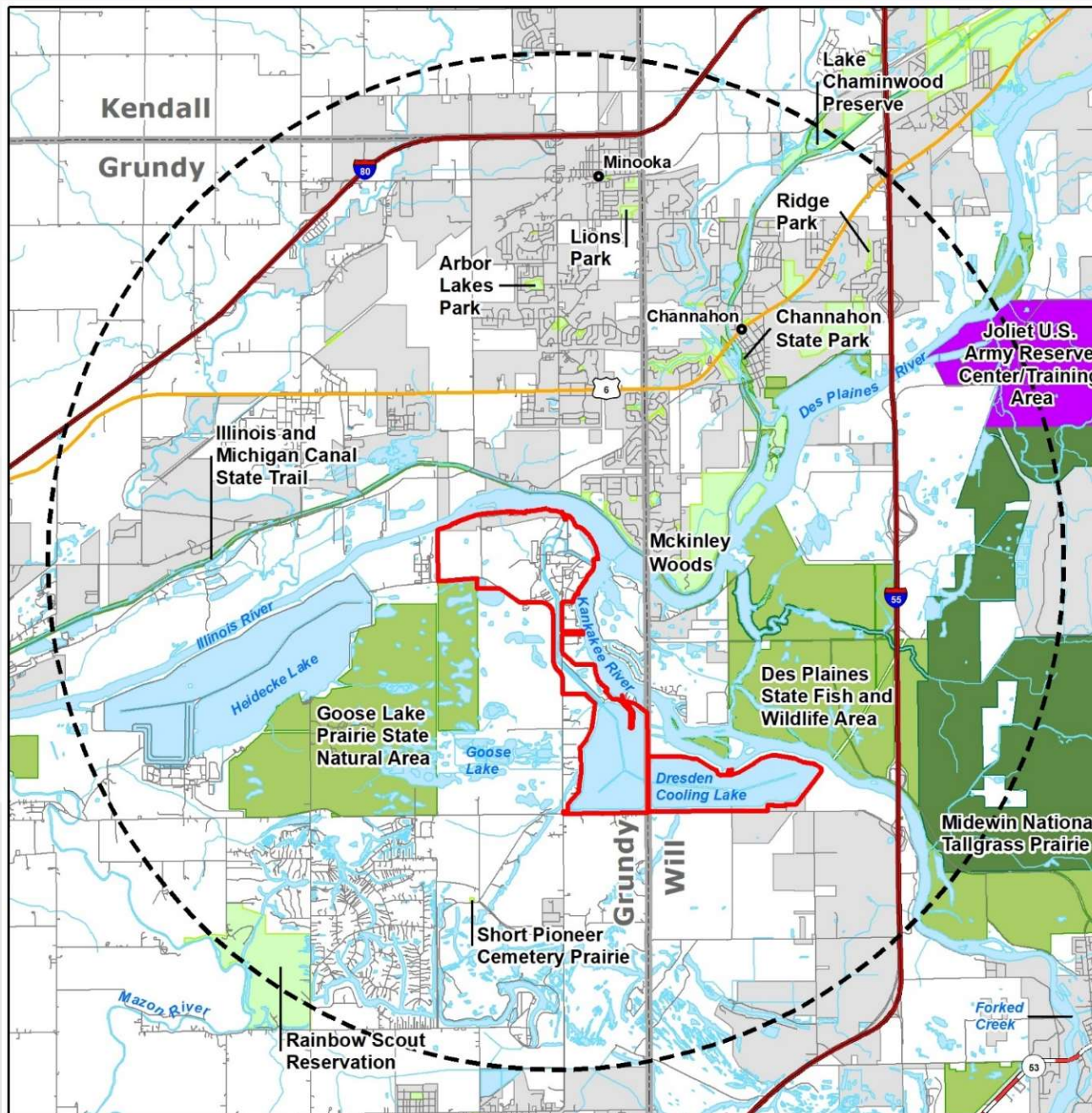
# Station Aerial

- Dresden Nuclear Power Station (DNPS) is owned and operated by Constellation, the licensee and applicant.
- The DNPS site is approximately 2,524 acres, located in Goose Lake Township, Grundy County, IL, and Wilmington Township, Will County, IL.
- The exclusion area is entirely within the site property except for a small extension into the Kankakee River.





# Vicinity (6-Mile) Map



## Legend

- Community
- Interstate
- U.S. Route
- State Highway
- Local Road
- Surface Water
- DNPS Site Boundary
- 6-Mile Radius
- County
- Place
- Local
- Federal
- State
- Military

# Environmental Report Discussion Items

## Methodology

- CEG will use the following guidance for preparation of the ER:
  - NUREG-1555, Supplement 1, Rev. 1 (2013)
  - NUREG-1437, Rev. 1 which is the Generic Environmental Impact Statement or GEIS for License Renewal of Nuclear Plants Revision 1 (2013)
  - Regulatory Guide 4.2, Supplement 1, Revision 1 (2013) for preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications

# ER Discussion Items, Continued

## Major Permits / Authorizations

- National Pollutant Discharge Elimination System (NPDES)
- Clean Water Act (CWA) 401 Certification (IEPA issued waiver)
- DNPS is outside the Illinois Coastal Management Program (ICMP) Area (e.g., CZMA).

## Consultations & Public Communications

- Consultations with agencies and Native American Tribes have taken place and all received responses will be included in the Subsequent License Renewal Application Environmental Report.



# ER Discussion Items, Continued

## Surface & Groundwater Use

- Kankakee River provides cooling water and service water for DNPS.
- Three water supply wells provide potable, sanitary, and demineralized water for the station.
- Two recovery wells for tritium release.

## Cooling Water System

- Includes a cooling lake, hot and cold canals with cooling towers, circulation water intake structure (CWIS), and a discharge flume.

## Alternatives Analysis

- Includes two evaluated combination alternatives
  - NGCC, SMR, purchased power
  - NGCC, SMR, wind turbines with battery storage, solar panels with battery storage.

## Independent Spent Fuel Storage Installation (ISFSI)

- Expansion of the West ISFSI pad is currently being installed and will be completed this summer 2023.

# ER Discussion Items: Ecology

## Essential Fish Habitat

- No essential fish habitat (EFH) or EFH areas protected from fishing are located within the vicinity of DNPS.

## Habitat Areas of Particular Concern

- No habitat areas of particular concern (HAPC) located within the 6-mile vicinity of DNPS.

## Critical Habitat

- Two species, Hine's Emerald Dragonfly and Indiana Bat, have critical habitat within the 6-mile radius of DNPS.

## Threatened and Endangered Species

- Eleven federally-listed threatened and endangered (T&E), or candidate species potentially occurring within the 6-mile radius of DNPS.
- One hundred ten state-listed T&E species are potentially occurring within Grundy, Kendall, and Will counties.

# ER Discussion Items: Cultural Resources

## Onsite Cultural Resource Surveys and Investigations

- There is one onsite cultural resource listed in the National Register of Historic Places (NRHP): Dresden Island Lock and Dam Historic District.
- No structures within the DNPS property have been documented through the Historic American Buildings Survey (HABS) or Historic American Engineering Record (HAER).

## Cultural Resources within the Vicinity

- Within the 6-mile vicinity, there are 504 offsite cultural resources listed on the Illinois Cultural Resources Databases:
  - ✓ 6 National Register of Historic Places properties, districts and sites; 414 archeological sites; 8 cemeteries; and 76 architectural structures/objects.
- No adverse effects are anticipated to any sites during the DNPS subsequent period of extended operation (SPEO).

# ER Discussion Items: SAMA/New and Sig

- Full SAMA analysis submitted as part of the original License Renewal Application
  - Full SAMA not required again
- NEI 17-04 SAMA New and Significant Information Review was performed
  - Considered 170 SAMAs
  - 35 required risk reduction quantifications, others were screened
  - None of the SAMA reduced risk more than 50%
- Concluded that there is no new and significant information related to the Dresden SAMA analysis
- The results of this analysis will be summarized in the ER.



# Project Management

- Constellation plans to submit the SLRA, including the ER, via the NRC Electronic Information Exchange (EIE)
- Constellation Environmental Lead will coordinate with the NRC PM
- CEG intends to utilize the Sciencetech eDocs portal to support NRC review.
  - SLRA, ER, boundary drawings, and UFSAR will be made available on eDocs portal
  - Sufficient time will be allocated to test the portal in advance of the ER Audit.
- Constellation will submit timely responses to NRC requests for additional information

# Schedule and Closing Remarks

- The DNPS SLR Application (SLRA) is on track to be submitted on the target date of April 17, 2024.
- The DNPS SLR ER will be consistent with industry practices and incorporate lessons learned from recent SLRs to meet NRC requirements, including Requests for Additional Information (RAIs).
- CEG will submit a high-quality application which will support efficient Staff reviews.
  - Highly knowledgeable team with significant SLR experience.
  - Participation in industry working groups and meetings.
  - Industry Peer Reviews of SLRA.
  - Monitoring on-going applicant processes.
  - Reviews of recent applicant RAIs, RCIs and Supplements.

# Questions

