

**PLACEMENT ABOVE THE UPPERMOST AQUIFER LOCATION RESTRICTIONS
FORMER ASH BASIN
POWERTON STATION
APRIL 2020**

Pursuant to Code of Federal Regulations Title 40, Part 257, Subpart D (40 CFR), Section 257.60, Geosyntec Consultants (Geosyntec) prepared this report to document compliance with location restrictions related to the uppermost aquifer at the existing Former Ash Basin at the Powerton Station (Site) in Pekin, Illinois.

The work presented in this report was performed under the direction of Mr. Jesse Varsho, P.G., P.E., of Geosyntec in accordance with §257.60. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. Placement Above the Uppermost Aquifer Location Restriction Determination

Based on previous groundwater separation evaluation performed at the Powerton Station, the base elevation of the Former Ash Basin is below the uppermost aquifer elevation. Because the Former Ash Basin does not meet the restrictions of §257.60, the Former Ash Basin will be closed to meet federal requirements.

2. Limitations and Certification

This report was prepared in accordance with current practices and the standard of care exercised by scientists and engineers performing similar tasks in the field of civil engineering. The contents of this report are based solely on the observations of the conditions observed by Geosyntec personnel and information provided to Geosyntec by Midwest Generation. Consistent with applicable professional standards of care, our opinions and recommendations were based in part on data furnished by others, which was consistent with other information that we developed in the course of our performance of the scope of services. The information contained in this report is intended for use solely by Midwest Generation and their subconsultants.



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**WETLANDS LOCATION RESTRICTIONS
FORMER ASH BASIN
POWERTON STATION
APRIL 2020**

Pursuant to Code of Federal Regulations Title 40, Part 257, Subpart D (40 CFR), Section 257.61, Geosyntec Consultants (Geosyntec) prepared this report to document compliance with location restrictions related to wetlands for the existing Former Ash Basin at the Powerton Station (Site) in Pekin, Illinois.

The work presented in this report was performed under the direction of Mr. Jesse Varsho, P.G., P.E., of Geosyntec in accordance with §257.61. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. *Wetlands Location Restriction Determination*

A portion of the Former Ash Basin is located in a mapped wetland included in the National Wetlands Inventory – Version 2 presented by the U.S. Fish and Wildlife Service (USFW) [USFW, 2018]. Because a portion of the Former Ash Basin is located within a mapped wetland, the basin will be closed to meet federal requirements.

2. *Limitations and Certification*

This report was prepared in accordance with current practices and the standard of care exercised by scientists and engineers performing similar tasks in the field of civil engineering. The contents of this report are based solely on the observations of the conditions observed by Geosyntec personnel and information provided to Geosyntec by Midwest Generation. Consistent with applicable professional standards of care, our opinions and recommendations were based in part on data furnished by others, which was consistent with other information that we developed in the course of our performance of the scope of services. The information contained in this report is intended for use solely by Midwest Generation and their subconsultants.



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Wetlands Location Restrictions
Bypass Basin, Powerton Station
April 2020

3. *References*

USFS, 2020. "National Wetlands Inventory, Version 2," <https://www.fws.gov/wetlands/data/Mapper.html>, updated 27 February 2020, accessed March 2020.

**FAULT AREAS LOCATION RESTRICTIONS
FORMER ASH BASIN
POWERTON STATION
APRIL 2020**

Pursuant to Code of Federal Regulations Title 40, Part 257, Subpart D (40 CFR), Section 257.62, Geosyntec Consultants (Geosyntec) prepared this report to document compliance with location restrictions related to fault areas for the existing Former Ash Basin at the Powerton Station (Site) in Pekin, Illinois.

The work presented in this report was performed under the direction of Mr. Jesse Varsho, P.G., P.E., of Geosyntec in accordance with §257.62. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. *Fault Areas Location Restriction Determination*

The Former Ash Basin is not located within 200 feet (60 meters) of a mapped Holocene-aged fault, as mapped by the United States Geological Survey (USGS) Quaternary Fault Database [USGS, 2020]. Therefore, the location of the Basin is in compliance with the requirements outlined in §257.62(a).

2. *Limitations and Certification*

This report was prepared in accordance with current practices and the standard of care exercised by scientists and engineers performing similar tasks in the field of civil engineering. The contents of this report are based solely on the observations of the conditions observed by Geosyntec personnel and information provided to Geosyntec by Midwest Generation. Consistent with applicable professional standards of care, our opinions and recommendations were based in part on data furnished by others, which was consistent with other information that we developed in the course of our performance of the scope of services. The information contained in this report is intended for use solely by Midwest Generation and their subconsultants.



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Fault Areas Location Restrictions
Former Ash Basin, Powerton Station
April 2020

3. *References*

USGS, 2020. “Interactive Quaternary Fault Database,” https://www.usgs.gov/natural-hazards/earthquake-hazards/faults?qt-science_support_page_related_con=4#qt-science_support_page_related_con, accessed March 2020.

**SEISMIC IMPACT ZONES LOCATION RESTRICTIONS
FORMER ASH BASIN
POWERTON STATION
APRIL 2020**

Pursuant to Code of Federal Regulations Title 40, Part 257, Subpart D (40 CFR), Section 257.63, Geosyntec Consultants (Geosyntec) prepared this report to document compliance with location restrictions related to seismic impact areas for the existing Former Ash Basin at the Powerton Station (Site) in Pekin, Illinois.


The work presented in this report was performed under the direction of Mr. Jesse Varsho, P.G., P.E., of Geosyntec in accordance with §257.63. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. *Seismic Impact Zones Restriction Determination*

The Former Ash Basin is not located within a seismic impact zone as defined in §257.63 and as mapped by the United States Geological Survey (USGS) [USGS, 2018]. Therefore, the location of the Basin is in compliance with the requirements outlined in §257.63(a).

2. *Limitations and Certification*

This report was prepared in accordance with current practices and the standard of care exercised by scientists and engineers performing similar tasks in the field of civil engineering. The contents of this report are based solely on the observations of the conditions observed by Geosyntec personnel and information provided to Geosyntec by Midwest Generation. Consistent with applicable professional standards of care, our opinions and recommendations were based in part on data furnished by others, which was consistent with other information that we developed in the course of our performance of the scope of services. The information contained in this report is intended for use solely by Midwest Generation and their subconsultants.



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Seismic Impact Zones Location Restrictions
Former Ash Basin, Powerton Station
April 2020

3. *References*

USGS, 2018. “2018 Long-term National Seismic Hazard Map,” <https://www.usgs.gov/natural-hazards/earthquake-hazards/hazards>, accessed March 2020.

**UNSTABLE AREAS LOCATION RESTRICTIONS
FORMER ASH BASIN
POWERTON STATION
APRIL 2020**

Pursuant to Code of Federal Regulations Title 40, Part 257, Subpart D (40 CFR), Section 257.64, Geosyntec Consultants (Geosyntec) prepared this report to document compliance with location restrictions related to unstable areas for the existing Former Ash Basin at the Powerton Station (Site) in Pekin, Illinois.

The work presented in this report was performed under the direction of Mr. Jesse Varsho, P.G., P.E., of Geosyntec in accordance with §257.64. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. *Unstable Areas Restriction Determination*

The Former Ash Basin is not located in an unstable area [Geosyntec, 2016]. Therefore, the locations of the Basin is in compliance with the requirements outlined in §257.64(a).

2. *Limitations and Certification*

This report was prepared in accordance with current practices and the standard of care exercised by scientists and engineers performing similar tasks in the field of civil engineering. The contents of this report are based solely on the observations of the conditions observed by Geosyntec personnel and information provided to Geosyntec by Midwest Generation. Consistent with applicable professional standards of care, our opinions and recommendations were based in part on data furnished by others, which was consistent with other information that we developed in the course of our performance of the scope of services. The information contained in this report is intended for use solely by Midwest Generation and their subconsultants.



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Unstable Areas Location Restrictions
Former Ash Basin, Powerton Station
April 2020

3. *References*

Geosyntec, 2016. Structural Stability and Factor of Safety Assessment, Ash Surge Basin and Bypass Basin, Powerton Station, October.