

**PLACEMENT ABOVE THE UPPERMOST AQUIFER LOCATION RESTRICTIONS
ASH SURGE BASIN AND BYPASS BASIN
POWERTON STATION
OCTOBER 2018**

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 placement above the uppermost aquifer for the existing Ash Surge Basin and Bypass Basin (the Basins) 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. Ms. Jane Soule, P.E., reviewed this report in accordance with Geosyntec's senior review policy.

1. Placement Above the Uppermost Aquifer Restriction Determination

The bases of Ash Surge Basin and Bypass Basin are separated from the upper limit of the uppermost aquifer by a minimum distance of five (5) feet (1.52 meters). Therefore, the locations of the Basins are in compliance with the requirements outlined in §257.60.

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
ASH SURGE AND BYPASS BASINS
POWERTON STATION
OCTOBER 2018**

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 Ash Surge Basin and Bypass Basin (the Basins) 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*

The Ash Surge Basin and the Bypass Basin are not located in mapped wetlands included in the National Wetlands Inventory – Version 2 presented by the U.S. Fish and Wildlife Service (USFW) [USFW, 2018]. Therefore, the locations of the Basins are in compliance with the requirements outlined in §257.61(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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Wetlands Location Restrictions
Ash Surge and Bypass Basins, Powerton Station
October 2018

3. *References*

USFS, 2018. "National Wetlands Inventory, Version 2," <https://www.fws.gov/wetlands/data/Mapper.html>, updated 1 May 2018, accessed 28 August 2018.

**FAULT AREAS LOCATION RESTRICTIONS
ASH SURGE AND BYPASS BASINS
POWERTON STATION
OCTOBER 2018**

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 Ash Surge Basin and Bypass Basin (the Basins) 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 Ash Surge Basin and the Bypass Basin are 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, 2018]. Therefore, the locations of the Basins are 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
Ash Surge and Bypass Basins, Powerton Station
October 2018

3. *References*

USGS, 2018. “Quaternary Fault and Fold Database,”
<https://earthquake.usgs.gov/hazards/qfaults/>, accessed 28 August 2018.

**SEISMIC IMPACT ZONES LOCATION RESTRICTIONS
ASH SURGE AND BYPASS BASINS
POWERTON STATION
OCTOBER 2018**

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 Ash Surge Basin and Bypass Basin (the Basins) 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 Ash Surge Basin and the Bypass Basin are not located within a seismic impact zone as defined in §257.53 and as mapped by the United States Geological Survey (USGS) [USGS, 2014]. Therefore, the locations of the Basins are 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
Ash Surge and Bypass Basins, Powerton Station
October 2018

3. *References*

USGS, 2014. "2014 U.S. Geological Survey National Seismic Hazard Maps, PGA 2% in 50 Years," <https://earthquake.usgs.gov/hazards/hazmaps/conterminous/index.php#2014>, accessed 28 August 2018.

**UNSTABLE AREAS LOCATION RESTRICTIONS
ASH SURGE AND BYPASS BASINS
POWERTON STATION
OCTOBER 2018**

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 Ash Surge Basin and Bypass Basin (the Basins) 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 Ash Surge Basin and the Bypass Basin are not located in unstable areas [Geosyntec, 2016]. Therefore, the locations of the Basins are 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
Ash Surge and Bypass Basins, Powerton Station
October 2018

3. *References*

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