



**Ash Pond Data Summaries**  
Frendt, Richard to: Race, Maria  
Cc: Xinying Wang

02/10/2012 11:21 AM

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History: This message has been forwarded.

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Maria:

Nearly forgot to send these to you – Here are some brief summaries of the data for each of the five ash pond sites. I haven't attached data tables to these, since those have already been sent out to everyone with the quarterly reports. The purpose of these documents is just to explain, on a high-level, the overall situation at each site. We can discuss our next steps at some point in the future, when it's convenient for you.

Regards,  
Rick

Richard M. Frendt, P.E.  
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Crawford Ash Pond Data Evaluation and Summary.pdf



Joliet Ash Pond Data Evaluation and Summary.pdf



Powerton Ash Pond Data Evaluation and Summary.pdf



Waukegan Ash Pond Data Evaluation and Summary.pdf



Will County Ash Pond Data Evaluation and Summary.pdf

# **ASH POND DATA EVALUATION & SUMMARY**

## **JOLIET #29 STATION**

**Midwest Generation, LLC**

**Joliet, Illinois**

**January 2012**

### **SITE DESCRIPTION**

The Joliet 29 Generating Station (the Site) is located in the City of Joliet, Will County, Illinois. The Site is located along the Des Plaines River just to the south of the city of Joliet. The Site includes three active ash ponds (Ash Pond 1, Ash Pond 2, and Ash Pond 3). Two of the ponds are lined with a high-density polyethylene (HDPE), while the third is lined with 12" of geocomposite material on the bottom; the total area of the three ash ponds is approximately 10 acres.

### **MONITORING WELLS**

Eleven monitoring wells have been installed (MW-1 through MW-11) surrounding the ash impoundments at the Joliet 29 facility. The well locations were selected so that both upgradient and downgradient wells were represented, based upon available data regarding the expected groundwater flow direction. Monitoring wells MW-8, MW-10, and MW-11 are installed upgradient of the ash ponds. MW-9 is installed in a location that could be considered either up- or downgradient depending upon which ash pond is considered. Monitoring wells MW-1 through MW-7 are considered to be downgradient wells. The wells are monitored quarterly in accordance with the long-term monitoring plan. Groundwater data has been collected on a quarterly basis starting in December of 2010 and continues to be generated into 2012. A Monitoring Well Location Map is included in this summary

### **GROUNDWATER ELEVATIONS**

Water levels in the monitoring wells are taken quarterly prior to sampling. The groundwater levels were compared to levels collected by the USGS stream flow data at Station Number 05539780 located where Route 53 crosses the Des Plaines River in Joliet, Illinois. The fluctuations in the groundwater elevations were compared to the fluctuations in the river levels for each monitoring event; there does not appear to be a correlation between the River levels and groundwater elevations at the site. The monitoring well elevations have seasonal variations which were not apparent in the river elevation data.

The overall groundwater elevation at the Site increased by 2 to 3 feet during the June 2011 sampling event as compared to the other three quarterly sampling events. This is not unexpected, as periods of high precipitation will recharge the shallow aquifer. During the September and December 2011 sampling events, groundwater elevations were slightly lower than the recorded River level (as compared to the other events, where groundwater was higher than the River). This appears to indicate that when the groundwater elevations are higher, groundwater at the Site is discharging to the River; when groundwater elevations are lower, the River is recharging the shallow aquifer.

Based upon the groundwater elevation data collected to date, the direction of groundwater flow is from the northwest to the southeast, generally toward the Des Plaines River. The direction of groundwater flow remains unchanged regardless of the elevation of the River and the groundwater table.

### **ANALYTICAL RESULTS**

Groundwater samples were collected from the 11 monitoring wells on site on a quarterly basis in 2011. Both upgradient and downgradient wells indicated Class I Groundwater Quality Standard exceedances. The following compounds exceeded their respective Class I standards: antimony, manganese, boron, sulfate, chloride, and total dissolved solids.

Monitoring well MW-9 contains the largest number of exceedances; given that this well is located between two of the ash ponds, it is difficult to draw strong conclusions regarding the concentrations in this well (i.e., analytes due to the ash ponds versus other industrial sources). Other than chloride (often associated with runoff), very few exceedances were found in the on-site wells, indicating that the ash ponds are not likely contributing to the groundwater concentrations. Chlorides were found throughout the site (MW-1 is the only well that has no detection of this chloride), indicating that another (possibly road-related) source is more likely for this compound.

Boron exceeded the Class I standard only in MW-11, an upgradient well. Again, the distribution of boron does not allow a strong conclusion to be drawn with respect to the integrity of the ash ponds.

Patrick performed trend analyses on the following parameters (each of these parameters was detected during at least once during each sampling event): antimony, arsenic, barium, cobalt, copper, iron, manganese, nickel, selenium, boron, sulfate, chloride, nitrogen-nitrate, total dissolved solids, fluoride, and nitrogen-nitrate-nitrite. Analytical parameters without any detections were not included in the analysis. There were no statistically significant (at the 95% confidence level) increasing or decreasing trends for any of the analyzed compounds.

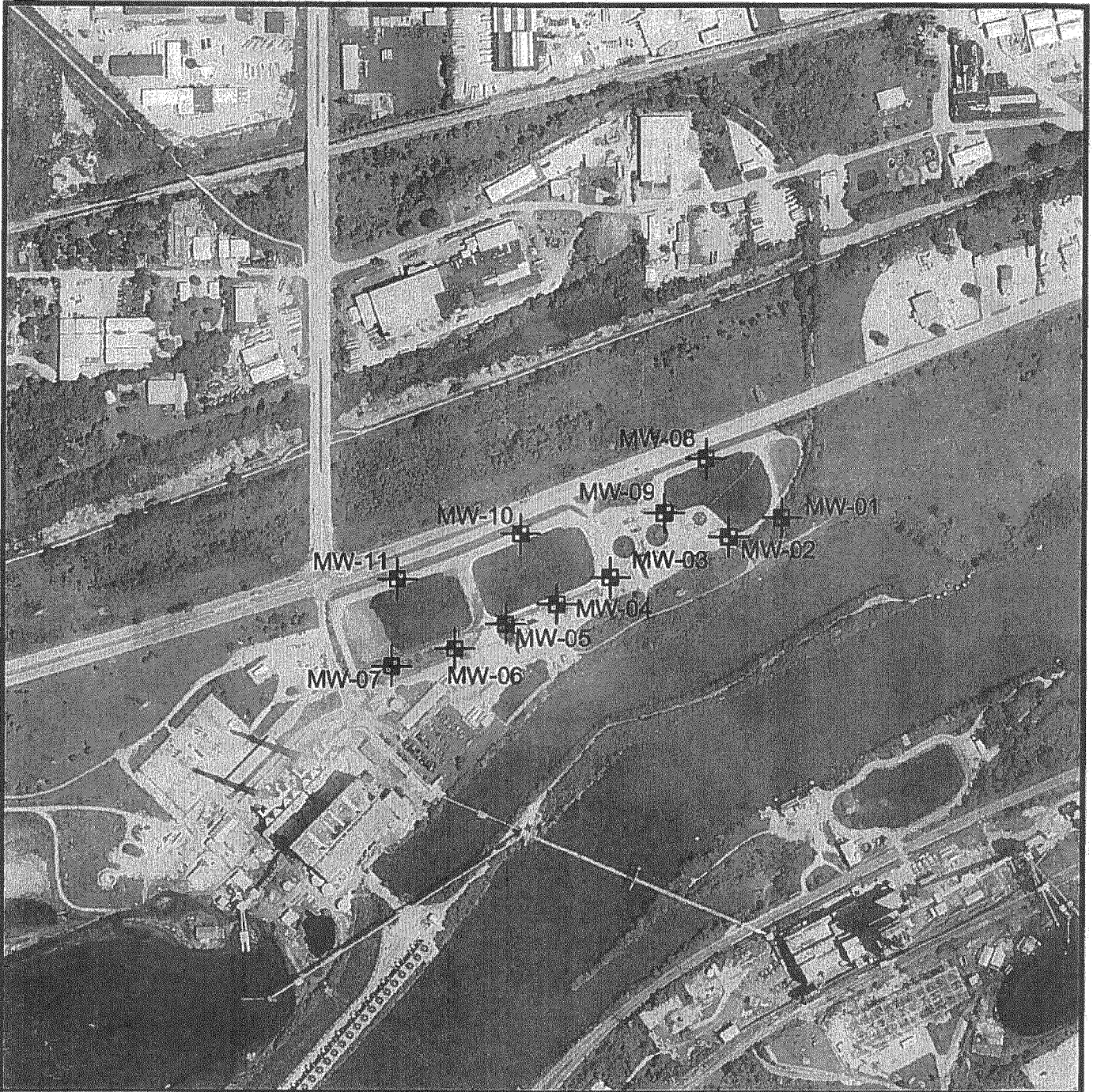
### **CONCLUSIONS**

- Generally, the groundwater was found to be relatively un-impacted at the Joliet 29 site, with the exception of chloride, that is more likely caused by road runoff. No clear pattern of contaminants was found; MW-9, located between two of the ash ponds, next to the clarifiers, contained the highest number of exceedances. It is not clear whether the source of the contaminants found in this well is due to the ash ponds, or some other industrial source or process.
- Patrick could not find any statistically significant trends in the data which indicate that the exceedances are either historical in nature, or more likely naturally occurring.

## **NEXT STEPS**

The monitoring wells on site will continue to be monitored on a quarterly basis through 2012. After six quarters of data have been collected, a statistical analysis will be performed to compare upgradient well results with downgradient well results.

DRAFT



**LEGEND**

 MW-01 Monitoring Well Location

AERIAL IMAGE SOURCE:  
LANDISCOR AERIAL INFORMATION INC., JULY 2008

**DRAFT**



1" = 600'

**Date: JAN. 2011**

**Proj No.: 21153.034**

**App. By: RMF**

**FIGURE 1**  
**MONITORING WELL LOCATION MAP**  
**JOLIET STATION NO. 29**  
**JOLIET, ILLINOIS**

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**MWG13-15\_14161**

# **ASH POND DATA EVALUATION & SUMMARY**

## **POWERTON STATION**

**Midwest Generation, LLC**

**Pekin, Illinois**

**January 2012**

### **SITE DESCRIPTION**

The Powerton facility (the Site) is located in Pekin, Tazewell County, Illinois. The Site is located along the Illinois River, south and west of the city of Pekin. The surrounding land use consists of the Illinois River to the north, industrial and residential properties to the east, agricultural land to the south, and Lake Powerton to the west.

The site contains three active ash ponds. Each ash pond is lined with 12" of geo-composite material on the bottom, and a geo-membrane liner on the side slopes; the total area of the three ash ponds is approximately 11 acres. One former ash pond that is no longer used is located east of the current ash ponds; it has been partially filled, and has been bisected by a rail loop, but still contains some ash.

### **MONITORING WELLS**

Ten monitoring wells have been installed (MW-1 through MW-10) surrounding the ash impoundments (both former and current) at the Powerton facility. The well locations were selected so that both upgradient and downgradient wells were represented, based upon available data regarding the expected groundwater flow direction (north, toward the Illinois River). Monitoring wells MW-1, MW-9 and MW-10 are installed upgradient of the ash ponds. The wells are monitored quarterly in accordance with the long-term monitoring plan. Groundwater data has been collected on a quarterly basis starting in December of 2010 and is continuing into 2012. A monitoring well location map is included in this summary.

### **GROUNDWATER ELEVATIONS**

Groundwater elevations in each monitoring well are collected quarterly prior to sampling. The groundwater levels were compared to levels collected by the USGS stream flow data at Station Number 05568500 located on the Illinois River at Kingston Mines, Illinois. Fluctuations in the groundwater elevations correlated to fluctuations in the River, indicating the groundwater at the site has a direct hydraulic connection to the surface water. The water elevations in all of the ash ponds, excluding the large, former ash pond to the east, are significantly higher than the surrounding groundwater elevations.

If wells MW-6 and MW-8 are excluded from the analysis, the direction of groundwater flow is clearly found to be from south to north, towards the River, as expected. The groundwater elevations in MW-6 and MW-8 are approximately 12 feet higher than in surrounding wells; the ground surface elevation in this area is also significantly higher than in the surrounding area. Boring logs from these wells also indicate the geology of this area consists of almost entirely fill

material. It is Patrick's opinion that both the topography and geology of this area create a localized groundwater high that is not necessarily attributable to leakage from the nearby wells. This conclusion is also supported by analytical data presented later in this report.

The correlation between groundwater elevations and the Illinois River elevations was weaker in the vicinity of wells MW-1, MW-9 and MW-10, which are the three wells furthest from the River and therefore the three wells that would be expected to be the least affected by changes in River elevation.

### **ANALYTICAL RESULTS**

Groundwater samples were collected from the 10 monitoring wells on site on a quarterly basis in 2011. Both upgradient and downgradient wells on site have Class I Groundwater Quality Standard exceedances. These exceedances include: arsenic, iron, manganese, boron, chloride, nitrogen-nitrate, and total dissolved solids.

Concentrations of constituents exceeding Class I Groundwater Standards in downgradient wells (MW-2 through MW-8) were compared with upgradient well (MW-1, MW-9 and MW-10) concentrations. Average downgradient concentrations of manganese, chloride, total dissolved solids, arsenic and iron were higher than in the upgradient wells. Upgradient concentrations of boron and nitrogen-nitrate were higher than in the downgradient wells. Note that, excluding manganese, chloride, and nitrate, all of the exceedances of Class I standards were detected in only one well (MW-7).

Manganese and chloride (both naturally occurring compounds) were the only compounds that exceeded Class I standards in MW-6 and MW-8, providing further evidence that the ash ponds near these wells are not leaking (no other more traditional coal constituent indicator compounds exceeded standards in these two wells).

Patrick performed trend analyses on the following parameters (arsenic, barium, chromium, cobalt, iron, manganese, nickel, selenium, boron, sulfate, chloride, nitrogen-nitrate, total dissolved solids, and fluoride). Analytical parameters without any detections were not included in the analysis.

The increasing trend in arsenic concentrations in MW-7 was the only statistically significant increase of any constituent in any well. There were no statistically significant (at the 95% confidence level) increasing or decreasing trends for any of the remaining analyzed compounds.

### **CONCLUSIONS**

- The groundwater underlying the Site appears to be in direct hydraulic connection to the Illinois River, except for the groundwater underlying the area near MW-6 and MW-8. There appears to a localized groundwater high in the vicinity of these wells that appears to be caused by local changes in topography and lithology.

- There does not appear to be any notable downgradient groundwater impact except potentially at well MW-7. Further evaluation of the nature and extent of any downgradient groundwater impact will be possible upon completion of the sixth sampling event and a statistical analysis of upgradient groundwater quality.

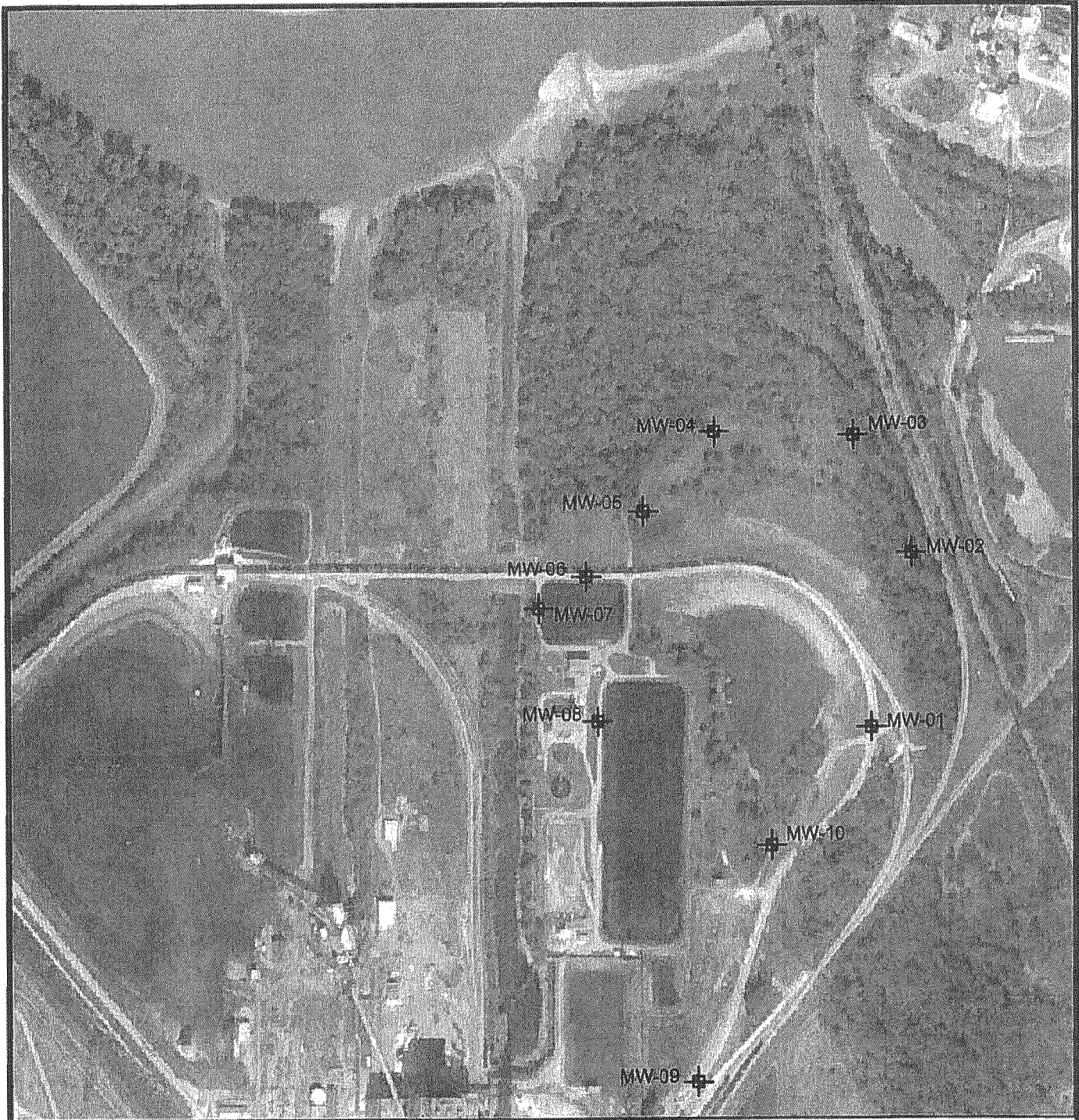
#### **NEXT STEPS**

The monitoring wells on site continue to be monitored on a quarterly basis. Possible modifications to the current sampling program that may provide useful data with respect to demonstrating the competency of the ash ponds could include:

- Surveying the ash ponds is an additional task for 2012 as listed in an Illinois EPA comment letter response to the initial Hydrogeologic Assessment. The purpose is to compare groundwater levels in the monitoring wells with the ash pond elevations. The additional surveying may provide data that will be useful in clarifying the nature of the groundwater high in the vicinity of MW-6 and MW-8.
- While not necessary at this time, additional investigations into the nature of the groundwater elevations at MW-6 and MW-8 could include the installation of groundwater level transducers or the performance of a tracer test in the ponds closest to MW-7.

DRAFT





**LEGEND**

 MW-01 Monitoring Well Location

AERIAL IMAGE SOURCE:  
2005 ORTHOPHOTO TAKEN FROM THE ILLINOIS NATURAL RESOURCES  
CLEARINGHOUSE

**DRAFT**



1" = 600'

<p><b>Date:</b> JAN. 2011</p>	<p align="center"><b>FIGURE 1</b> <b>MONITORING WELL LOCATION MAP</b> <b>POWERTON STATION</b> <b>PEKIN, ILLINOIS</b></p>	<p align="center"><b>PATRICK</b> <b>ENGINEERING INC.</b></p> <p>4970 Varsity Drive Lisle, Illinois 60532-4101 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000409</p> <p align="right">TEL. (630) 785-7200 FAX (630) 724-1681</p>
<p><b>Proj No.:</b> 21153.018</p>		
<p><b>App. By:</b> RMF</p>		

# **ASH POND DATA EVALUATION & SUMMARY**

**WAUKEGAN STATION  
Midwest Generation, LLC  
Waukegan, Illinois  
January 2012**

## **SITE DESCRIPTION**

The Waukegan facility (the Site) is located in the City of Waukegan, Lake County, Illinois. The Site is located along the shore of Lake Michigan on the northeast side of Waukegan. The surrounding land use consists of undeveloped land to the north, apparently vacant industrial land to the south, residential properties to the west, and Lake Michigan to the east. The Site contains two active ash ponds. The ponds are lined with a high-density polyethylene (HDPE) liner; the total area of the two ash ponds is approximately 25 acres.

## **MONITORING WELLS**

Five monitoring wells have been installed (MW-1 through MW-5) surrounding the ash impoundments at the Waukegan facility. The well locations were selected so that both upgradient and downgradient wells were represented, based upon available data regarding the expected groundwater flow direction. Monitoring well MW-5 is installed upgradient of the ash ponds. The wells are monitored quarterly in accordance with the long-term monitoring plan. Groundwater data has been collected on a quarterly basis starting in December of 2010 and is continuing into 2012. A Monitoring Well Location Map is included in this summary.

## **GROUNDWATER ELEVATIONS**

Groundwater levels in the monitoring wells are collected quarterly prior to sampling. The groundwater levels were compared to the Lake Michigan water levels collected by the NOAA Lake Michigan Water Elevation data at stations collected near Milwaukee, Wisconsin and Calumet, Indiana. The data from these two stations were interpolated to calculate an expected elevation near the Waukegan Station. The fluctuations in the groundwater elevations were compared to the fluctuations in the lake water levels for each monitoring event. There appears to be a correlation between Lake levels and the groundwater levels at the Site.

The direction of groundwater flow at the site is west to east, directly towards Lake Michigan.

Waukegan Station operates two ash ponds at the Site. Only one of the ponds is active at any given time. When a given pond is active, its water elevation can be significantly higher (>10') than the natural groundwater elevation at the Site. Yet these levels tend to be maintained for an extended period, indicating that there is no significant leakage through the liner of the pond. Similarly, the non-active pond is maintained at an elevation well below the natural groundwater elevation (<8'), with no observable leakage into the pond. Both of these observations are consistent with the fact that these ponds are lined with an HDPE liner, and do not appear to be hydraulically connected with groundwater at the site.

## **ANALYTICAL RESULTS**

Groundwater samples were collected from the 5 monitoring wells on site on a quarterly basis in 2011. Both the upgradient well and downgradient monitoring wells on site have Class I Groundwater Quality Standard exceedances. The following compounds exceeded their respective Class I standards: arsenic, boron, manganese, sulfate, chloride and total dissolved solids.

Patrick compared upgradient well concentrations with downgradient well concentrations. The concentrations of boron, iron, manganese, chloride and total dissolved solids are higher, sometimes significantly higher, in the upgradient well (MW-5) than in the downgradient wells. The downgradient wells, MW-1 through MW-4, have higher concentrations of arsenic, with the highest concentrations found in MW-1 (the northernmost downgradient well).

Patrick performed a trend analysis on the following analytical parameters, (arsenic, barium, cyanide, iron, manganese, selenium, boron, sulfate, chloride, nitrogen-nitrate, total dissolved solids, fluoride, and nitrogen-nitrate-nitrite). Analytical parameters without any detections were not included in the analysis. There were no statistically significant (at the 95% confidence level) increasing or decreasing trends for any of the analyzed compounds.

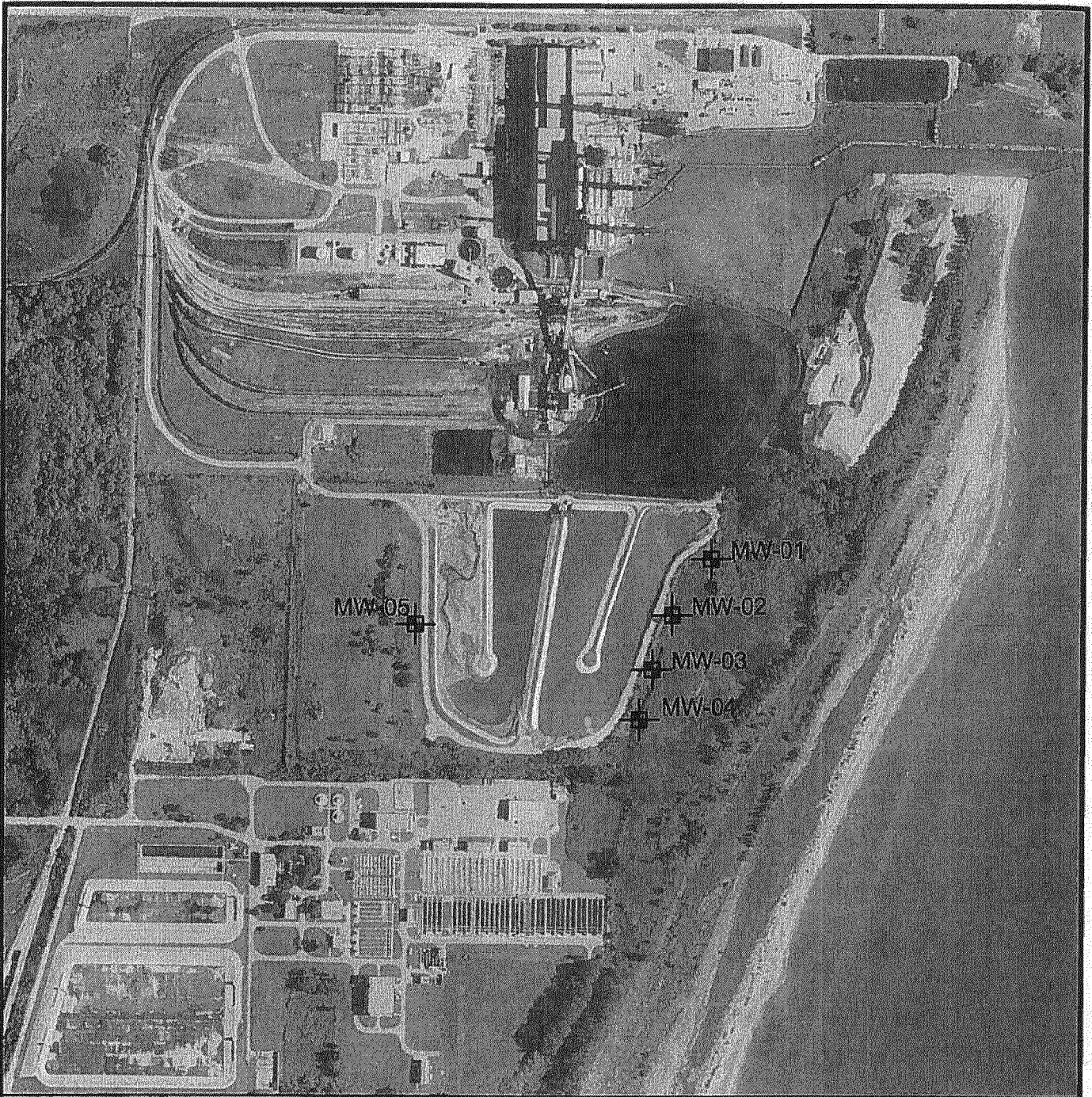
## **CONCLUSIONS**

- There is a strong correlation between Lake Michigan elevations and the groundwater levels in the monitoring wells on site. The groundwater levels collected on site consistently fluctuated on a similar scale with water levels in Lake Michigan which indicate that the groundwater on site is hydraulically connected to the Lake, as expected.
- The pond elevation data when compared with the natural groundwater elevation at the Site provide strong evidence that there is no hydraulic connection between these units; the ponds do not appear to be leaking.
- The groundwater elevation data show that MW-5 is an upgradient well. The elevated concentrations of compounds of interest in MW-5 appear to be the result of the well being installed in a former ash disposal area and not a result of leakage from the current ash ponds.
- The relatively low concentrations of compounds of interest in the downgradient wells, as compared to those found in the upgradient well, appear to indicate that the current ash ponds are not leaking. The source of the elevated concentration of arsenic in MW-1 is unknown, but could be related to the nearby coal pile. The Waukegan Site data appear to support the conclusion that the ash ponds do not appear to be the source of groundwater contamination at the Site.

## **NEXT STEPS**

- The monitoring wells on site will continue to be monitored on a quarterly basis through 2012. Monitoring wells that contain detections will continue to be monitored in order to observe any trend that may be occurring whether the compounds may be increasing or decreasing.
- An additional well was requested by the Illinois EPA in a comment letter in response to the Waukegan Hydrogeologic Assessment. The well was proposed to be installed at the southern edge of the property to assess the potential for off-site migration. No definitive decision regarding the installation of this requested well has yet been made.

DRAFT



**LEGEND**

 MW-01 Monitoring Well Location

AERIAL IMAGE SOURCE:  
LANDISCOR AERIAL INFORMATION INC., JULY 2008

DRAFT



1" = 600'

<p><b>Date:</b> JAN. 2011</p>	<p align="center"><b>FIGURE 1</b> <b>MONITORING WELL LOCATION MAP</b> <b>WAUKEGAN STATION</b> <b>WAUKEGAN, ILLINOIS</b></p>	<p align="center"><b>PATRICK</b> <b>ENGINEERING INC.</b></p> <p>4870 Varsity Drive Liste, Illinois 60532-4101 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000409</p> <p align="right">TEL. (630) 795-7200 FAX (630) 724-1681</p>
<p><b>Proj No.:</b> 21153.033</p>		
<p><b>App. By:</b> RMF</p>		

# ASH POND DATA EVALUATION & SUMMARY

## WILL COUNTY STATION

Midwest Generation, LLC

Romeoville, Illinois

January 2012

### SITE DESCRIPTION

The Will County Generating Station (the Site) is located in Romeoville, Will County, Illinois. The Site is located between the Chicago Sanitary and Ship Canal (CSSC) and the Des Plaines River east of the city of Romeoville. The surrounding land use consists of undeveloped land to the north, the Chicago Sanitary and Ship Canal to the east, a quarry to the south, and the Des Plaines River to the west. The Site includes four active ash ponds. The ponds are lined with 36" of geo-composite material; the total area of the four ash ponds is approximately 8 acres.

### MONITORING WELLS

Ten monitoring wells have been installed (MW-1 through MW-10) surrounding the ash impoundments at the Will County facility. The well locations were selected so that both upgradient and downgradient wells were represented based upon available data regarding the expected groundwater flow direction. Monitoring wells MW-1 through MW-6 were intended to be installed downgradient of the ash ponds. The wells are monitored quarterly in accordance with the long-term monitoring plan. Groundwater data has been collected on a quarterly basis starting in December of 2010 and continuing into 2012. A monitoring well location map is attached to this summary.

### GROUNDWATER ELEVATIONS

The groundwater elevation in each of the ten wells was measured prior to sampling. The groundwater levels were compared to levels collected by the USGS stream flow data at Station Number 05536998 located in the CSSC at the Lockport Controlling Works in Lockport, Illinois and at Station Number 05534000 located in the Des Plaines River at Romeoville Road. Fluctuations in the groundwater elevations correlated to fluctuations in the CSSC and the River, indicating the groundwater at the site has a direct hydraulic connection to the surface waters. The elevation of the Des Plaines River is normally higher than the elevation of the CSSC (Wells MW-7 through MW-10 were installed to be the upgradient wells based on this observation). The surface water elevations in the ash ponds were also measured during the initial investigation; the water elevations in the ash ponds were 3 to 6 feet higher than the groundwater elevations in the nearby wells.

Patrick's initial conceptual model of groundwater flow at the Site was that the groundwater was hydraulically connected to both the River and the CSSC with groundwater flowing from west to east. The data collected to date indicates that the groundwater is in direct hydraulic connection to the River and the CSSC; however, the groundwater elevations are all higher than either of the surface waters and the direction of groundwater is generally found to be from the northeast to southwest. It is unknown whether the presence of this groundwater 'mound' between the River

and the CSSC is due simply to natural mounding due to recharge, or is partially related to leakage from the ash ponds themselves. The groundwater elevation in MW-5 has periodically been higher than either MW-4 to the north and MW-6 to the south, which could conceivably be due to a leakage contribution from the South Pond (directly west of MW-5), but it is difficult to make such a conclusion on the basis of the existing data. The collection of additional ash pond elevation data (this was only collected during the first sampling event) may help in further defining the relationships between groundwater and surface water at the Site. Definitive demonstration that the ponds are not leaking could really only be supplied by something like a bromide tracer test, but these are expensive, and even these tests are not guaranteed to settle the matter one way or another.

### **ANALYTICAL RESULTS**

Groundwater samples were collected from the 10 monitoring wells on site on a quarterly basis in 2011. Both upgradient and downgradient wells indicated Class I Groundwater Quality Standard exceedances. The following compounds exceeded their respective Class I standards: manganese, boron, sulfate, chloride, and total dissolved solids (TDS).

Patrick compared the concentrations of those compounds that exceeded the Class I standards in the upgradient and downgradient wells. Based upon the current model of groundwater flow at the Site, only MW-1 appears to be a true upgradient well (MW-2 through MW-6 are considered side-gradient and MW-7 through MW-10 are downgradient). Compared to MW-1, concentrations of boron were higher in all of the other wells; concentrations of sulfate were higher in 7 of the other wells; TDS was higher in 5 out of 9 wells; manganese was higher in 4 out of the other wells; and chloride was higher in only 2 of the other wells. The results of these comparisons could be used to argue that the ash ponds are potentially impacting downgradient groundwater at the Site. However, there is still uncertainty regarding the groundwater flow paths and Patrick has not yet performed a rigorous statistical analysis of upgradient groundwater quality.

Patrick performed trend analyses on the following parameters (each of these parameters was detected during at least once during each sampling event): arsenic, barium, cobalt, iron, manganese, nickel, selenium, boron, sulfate, chloride, total dissolved solids, fluoride, nitrogen-nitrite, and nitrogen-nitrate-nitrite. There were no statistically significant (at the 95% confidence level) increasing or decreasing trends for any of the analyzed compounds.

### **CONCLUSIONS**

- The groundwater and surface water elevation data indicate that the groundwater at the site is in direct hydraulic connection with both the CSSC and the Des Plaines River. This conclusion is also supported by the increase in chloride concentrations in the spring of 2011 (chloride concentrations in surface water generally peak in the spring as snow melt and precipitation runoff transport dissolved road salt).

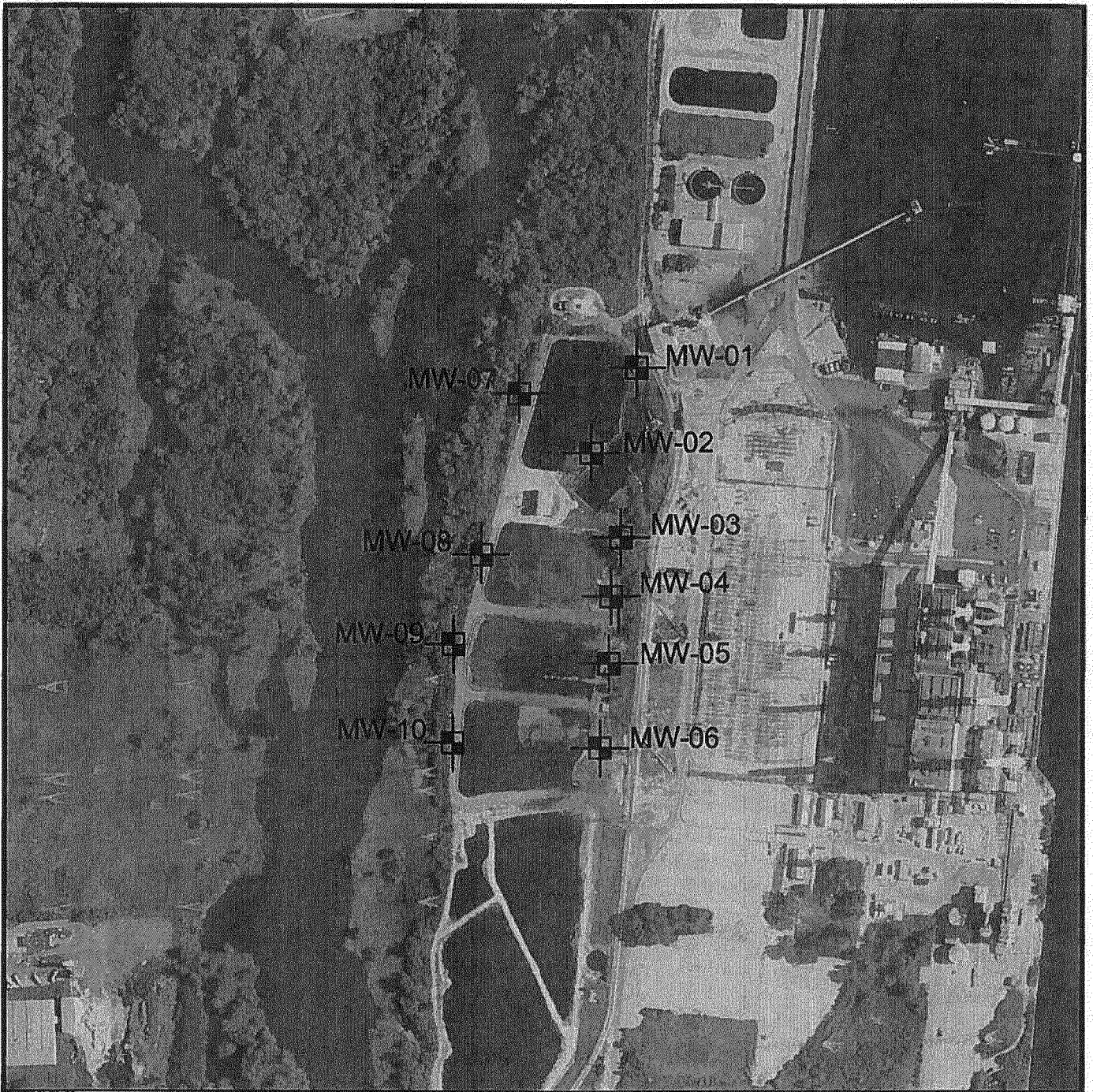
- The groundwater elevations are generally higher than either the CSSC or the River, indicating that there is a groundwater 'mound' underlying the Site. Since the ash pond water elevations are significantly higher than the groundwater elevations and the potentiometric surface maps do not indicate a clear radial flow pattern away from the ash ponds, it is possible that the groundwater mounding is a natural occurrence due to recharge.
- The results of the groundwater sampling indicate that there are exceedances of the Class I groundwater quality standards for compounds that can be associated with coal ash, most notably boron. Boron and sulfate concentrations are higher in nearly all of the downgradient wells, when compared to MW-1, indicating that the ash ponds are potentially impacting downgradient groundwater. However, given the limited number of upgradient wells at the Site (one, if the mounding is considered), no firm conclusion can be drawn with respect to groundwater analytes at the Site.

#### **NEXT STEPS**

The monitoring wells on site continue to be monitored on a quarterly basis. Possible modifications to the current sampling program that may provide useful data with respect to demonstrating the competency of the ash ponds could include:

- Patrick could collect the water elevations of the ash ponds during each quarterly sampling event. While this could provide additional useful data, the ponds elevations experience such frequent fluctuation based solely on the station operations elevation fluctuations in the ash ponds that quarterly pond elevation data may not yield any useful data.
- Given the complicated nature of hydraulic flow and contaminant distribution at the Site, it is difficult to draw any strong conclusions regarding the nature of the ash ponds at the Will County Site. It may be that definitive data on whether or not these ponds are contributing to groundwater contamination would only be provided by a tracer test, using bromide, or some other conservative tracer.





**LEGEND**


 MW-01 Monitoring Well Location

**DRAFT**



AERIAL IMAGE SOURCE:  
LANDISCOR AERIAL INFORMATION INC., JULY 2008

1" = 600'

**Date: JAN. 2011**

**Proj No.: 21153.017**

**App. By: RMF**

**FIGURE 1**  
**MONITORING WELL LOCATION MAP**  
**WILL COUNTY STATION**  
**ROMEovILLE, ILLINOIS**

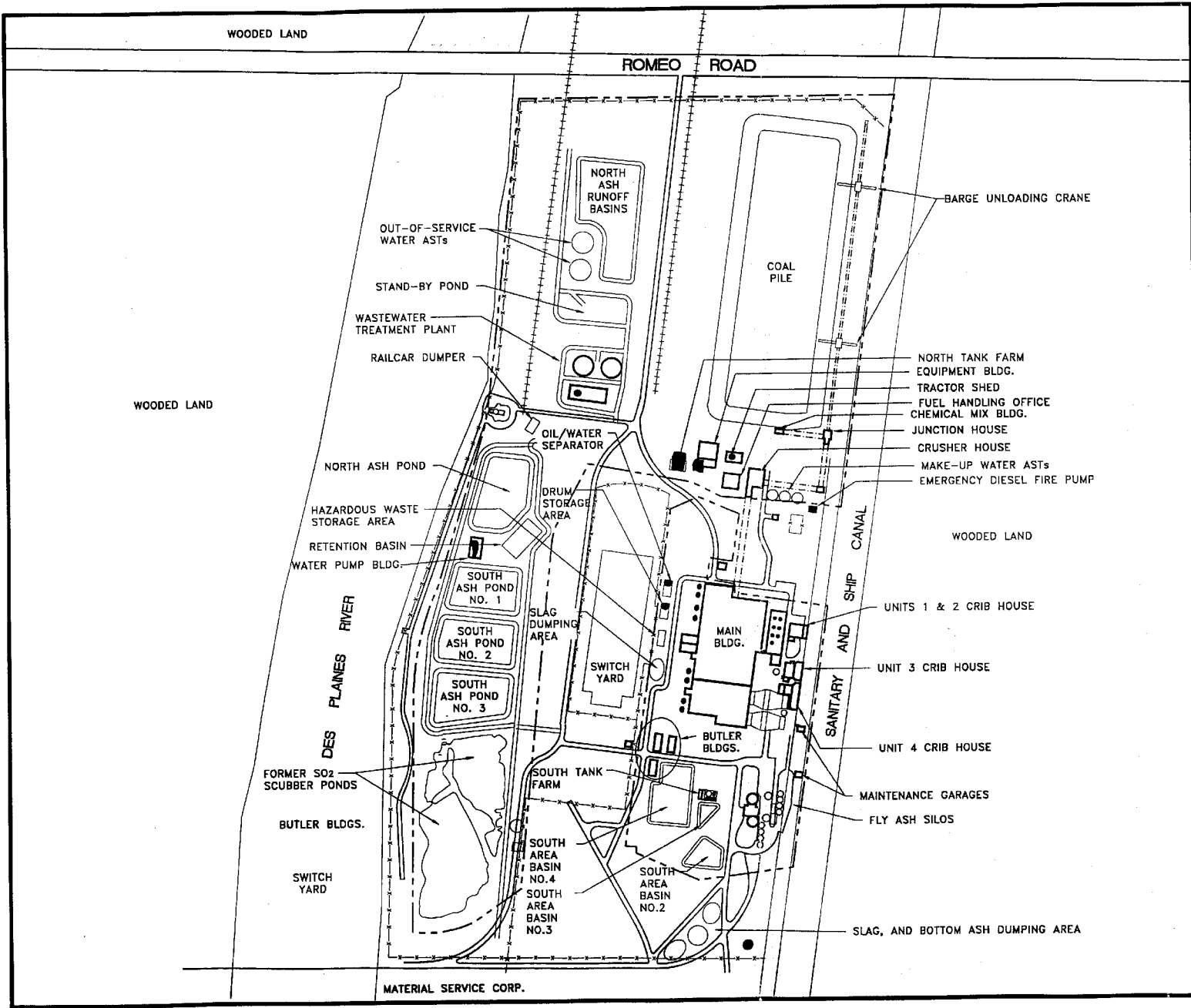
**PATRICK**  
**ENGINEERING INC.**

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**MWG13-15\_14173**



**LEGEND:**

- PROPERTY BOUNDARY
- x-x-x- FENCE
- - - - CONVEYOR LINE
- ++++ RAILROAD LINE
- AREA OF STAINING

Labels on the right side of the site plan include: BARGE UNLOADING CRANE, COAL PILE, NORTH TANK FARM EQUIPMENT BLDG., TRACTOR SHED, FUEL HANDLING OFFICE, CHEMICAL MIX BLDG., JUNCTION HOUSE, CRUSHER HOUSE, MAKE-UP WATER ASTs, EMERGENCY DIESEL FIRE PUMP, UNITS 1 & 2 CRIB HOUSE, UNIT 3 CRIB HOUSE, UNIT 4 CRIB HOUSE, MAINTENANCE GARAGES, FLY ASH SILOS, SLAG, AND BOTTOM ASH DUMPING AREA, SANITARY AND SHIP CANAL, BUTLER BLDGS., MAIN BLDG., SWITCH YARD, SLAG DUMPING AREA, DRUM STORAGE AREA, OIL/WATER SEPARATOR, NORTH ASH POND, HAZARDOUS WASTE STORAGE AREA, RETENTION BASIN, WATER PUMP BLDG., SOUTH ASH POND NO. 1, SOUTH ASH POND NO. 2, SOUTH ASH POND NO. 3, SOUTH TANK FARM, SOUTH AREA BASIN NO. 2, SOUTH AREA BASIN NO. 3, SOUTH AREA BASIN NO. 4, BUTLER BLDGS., FORMER SO<sub>2</sub> SCUBBER PONDS, SWITCH YARD, WASTEWATER TREATMENT PLANT, RAILCAR DUMPER, STAND-BY POND, OUT-OF-SERVICE WATER ASTs, NORTH ASH RUNOFF BASINS, WOODED LAND, and WOODED LAND.

**Note:**  
 • All dimensions and locations are approximate.

**Source:**  
 • ENSR field observations.

Dwg No: ROMEOVL

WILL COUNTY GENERATING STATION  
 529 E. ROMEO ROAD  
 ROMEOVILLE, ILLINOIS

**COMMONWEALTH EDISON COMPANY**

September 1998 File No: 1801-023-700

## SITE PLAN

NOT TO SCALE

FIGURE 2

**ENSR**