



Will County South Ash Pond Liner Design Status

Eric J. Tlachac to: Blake Connolly

02/21/2008 09:13 AM

Cc: "James Sault", "Michael Prosecky", "Maria Race", "Heather M. Simon", "Rick J. Guenther Jr."

History: This message has been replied to.

Hello Blake,

I wanted to give you an update on where we are at on the design for the replacement liner for South Ash Ponds 2 and 3, and transmit our preliminary (draft) drawing set to you to facilitate further discussion (see the attached portable document format files).

We have completed the Illinois Environmental Protection Agency (IEPA) forms required for the Water Pollution Control (WPC) permit application, as well as a draft cover letter to support them (since the forms are more "geared" towards sanitary sewer projects than industrial projects like this). We have also made good progress on a preliminary drawing set for the replacement liner to accompany the permit application.

However, during review of this preliminary drawing set, I came across a couple of things that warrant further discussion with you (described below) and possibly others at Midwest Generation (e.g., Mike Prosecky?). We would like to schedule a teleconference with you for this purpose, and the narrative below is sort of lengthy, so this is probably better covered on the phone, anyway. Our design team is available after 10 am today (Thursday, 2/21), and I am available all day on Friday, 2/22.

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The "base" design that we've been starting with at each station includes placing the replacement liner over the existing liner to minimize effort associated with removing the existing liner and associated project costs. However, we've evaluated the impact of this concept to the capacity of South Ash Ponds 2 and 3, and, by our calculations, this impact is approximately 18% reduction in capacity. Given that these ponds are already "turned over" on an approximate 6-month schedule, I'm thinking that such a capacity reduction is probably unacceptable.

To mitigate this impact, our first recommendation is to remove the top 12 inches of the existing liner (Poz-o-Pac according to the Harza drawing 8691D1-C11 that you provided to us) and some of the 12-inch-thick "random fill" layer beneath, assuming they are still intact. That would just about completely mitigate the capacity impact of the 18-inch "base" design thickness for the replacement liner, plus leave some of the random fill layer and a secondary 12-inch-thick layer of Poz-o-Pac beneath the replacement liner.

Maintaining the secondary layer of Poz-o-Pac would not be required by IEPA, and there is no technical need to do so, but there is also no technical need to remove it, either. We anticipate removal of the Poz-o-Pac to be a fairly labor-intensive effort, which may also present a disposal issue (can Poz-o-Pac be recycled like other concrete aggregate?). In fact, we did not want to remove the existing Poz-o-Pac liner

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Comp. Ex. 48

at Joliet because we were concerned that would present a subgrade surface that would jeopardize the integrity of the geomembrane replacement liner (i.e., sharp edges), or at least require additional accommodations/cost to mitigate, but the Joliet ponds are 15-20 feet deep (as opposed to 7 feet at Will County), so the capacity impact there was much less significant. By leaving some of the random fill layer above the secondary layer of Poz-o-Pac, we are hoping that will present an acceptable subgrade for the replacement liner. If not, this could be easily mitigated by adding a thin (4-6 inch) layer of sand or a geotextile between the subgrade surface and replacement liner, but this would obviously add some cost to the project. Is there any way of knowing what that random fill layer consists of (I'm guessing not, or you would have provided that info already)? Perhaps we can remove a small section of the upper Poz-o-Pac to investigate this following completion of the dredging of Pond 2?

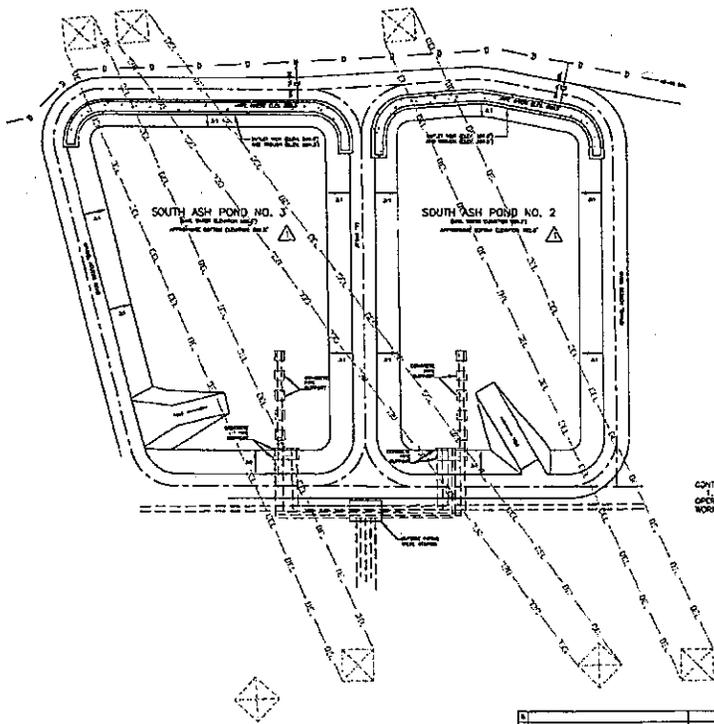
I'd also like to discuss any changes needed to the access ramps to the ponds (per our preliminary discussion during our 12/17/07 site visit), as well as extension of the warning layer up the side slopes of the ponds. Extension of the warning layer is something that Mike Prosecky brought up during our preliminary project meeting last October. This would increase the capacity impact, but could also be easily mitigated in the same manner as described in our recommendation above. In fact, removing existing material on the side slopes would actually help some issues that we have with regard to subgrade condition (i.e., we would need to put something over the existing shot rock on the side slopes, if left in place, to protect the liner) and attachment of the replacement liner to the discharge weir. However, it would further complicate matters around the inlet pipe supports, but I'm certain that we could come up



with a mutually beneficial solution for that. D1900C010-00 080220.pdf D1900C020-00 080220.pdf



D1900C030-00 080220.pdf D1900C031-00 080220.pdf



LEGEND	
---	ABOVEGROUND PIPE
- - -	UNDERGROUND DISCHARGE PIPING
---	OVERHEAD ELECTRIC LINE
□	CONCRETE

CONTRACTOR NOTES:
 1. CONTRACTOR SHALL NOT DISTURB OPERATIONS OF ASH POND 3 WHILE WORKING ON ASH POND 2 AND VICE VERSA.

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 SCALE IN FEET
 (APPROXIMATE)

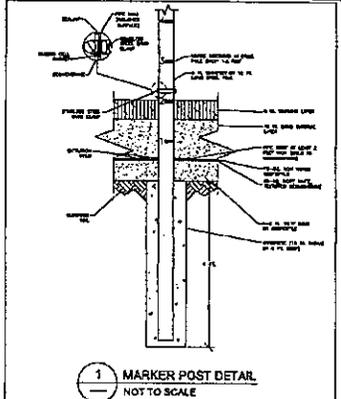
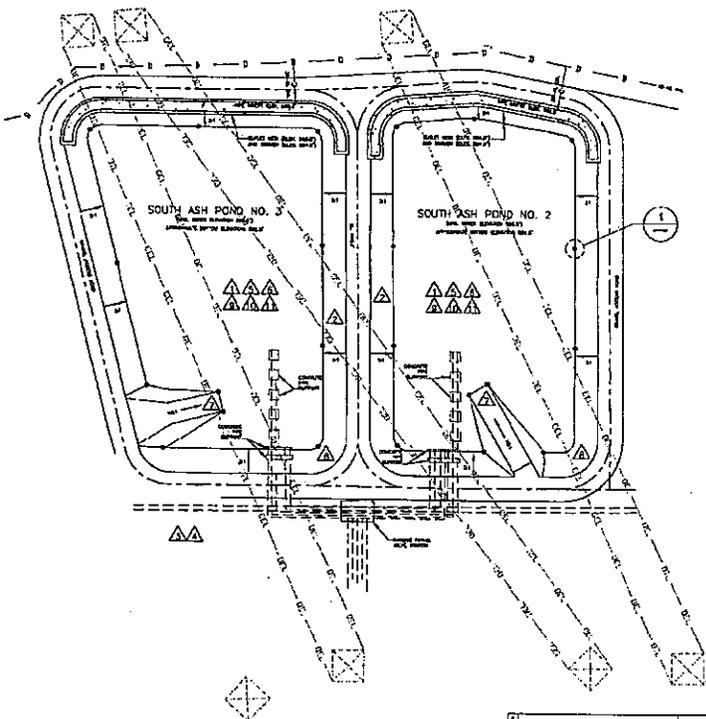
This drawing was prepared using AutoCAD 2000. All dimensions are in feet unless otherwise noted. The user of this drawing is advised that the user shall be responsible for all interpretations of the drawing and for all consequences of any use of this drawing.

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PROJECT NO. 1300	EXISTING CONDITIONS ASH POND LINER REPLACEMENT MIDWEST GENERATION WILL COUNTY GENERATING STATION ROQUEVILLE, ILLINOIS	SHEET NO. 0210
DRAWN BY: JAC DATE: 01/20/08 CHECKED BY: JAC DATE: 01/20/08 APPROVED BY: JAC DATE: 01/20/08		



- CONTRACTOR NOTES:**
1. CONTRACTOR SHALL BEGIN CONSTRUCTION SEQUENCE WITH ASH POND NO. 2.
 2. CLEAR AND GRUB ALL BRUSH ALONG TOP OF DAPDS TO PILES.
 3. CONTRACTOR SHALL STORE ALL GEOMETRICS AND ELEVATION MATERIALS IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
 4. CONTRACTOR SHALL STAFF AND STAKE EQUIPMENT AT LOCATION APPROVED BY THE OWNER.
 5. PROTECT ALL CONCRETE AND STEEL STRUCTURES THROUGHOUT PROJECT DURATION.
 6. CONTRACTOR SHALL REMOVE ALL VEGETATION, ROCKS, AND OTHER DEBRIS GREATER THAN 3 INCHES IN SIZE FROM POND SURFACE AND DEPOSE OF IT IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
 7. CONTRACTOR SHALL REMOVE AT LEAST 18 INCHES OF EXISTING BANK MATERIAL FOR REVEAL OF SUBGRADE LAYER AND FINAL LAYERS OF SOIL.
 8. CONTRACTOR SHALL INSTALL MARKER POSTS ALONG THE BARE OF THE ASH POND AS SHOWN AND IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND DETAIL.
 9. CONTRACTOR SHALL PLACE SUBGRADE MATERIAL OVER EXISTING LINER IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
 10. SUBGRADE LAYER MUST BE APPROVED BY OWNER AND/OR ENGINEER PRIOR TO REINSTALLATION OF CONCRETE.
 11. CONTRACTOR SHALL PROVIDE MEANS TO PROTECT SUBGRADE LAYER FROM EROSION, STORM WATER, AND HEAVY EQUIPMENT TRAFFIC. DAMAGE TO SUBGRADE LAYER SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

LEGEND

---	ADVEYGROUND PIPE
---	UNDERGROUND DISCHARGE PIPING
---	OVER-HEAD ELECTRIC LINE
▲	MARKER POST LOCATION
■	CONCRETE



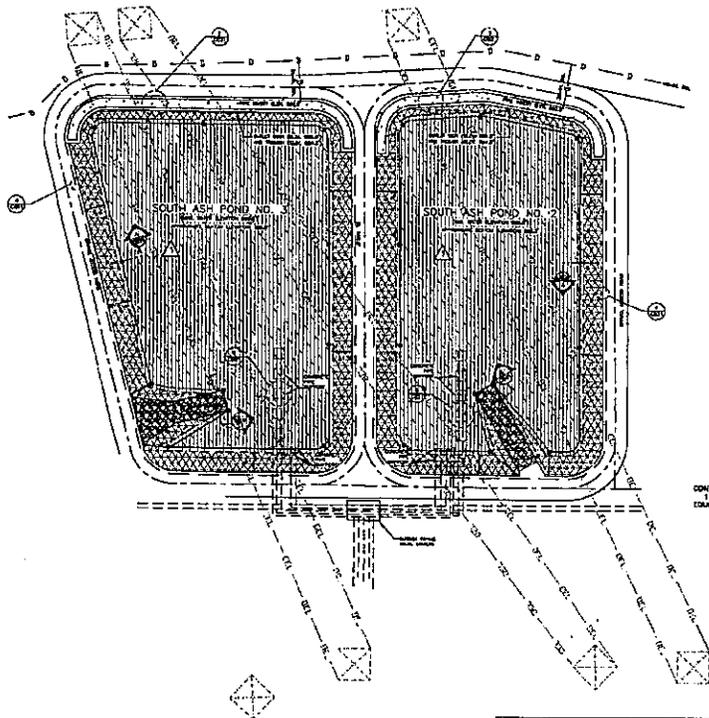
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PROJECT NO.	1500
ISSUED BY DATE	MR. ELI/8/17/18
DRAWN BY	MR. ELI/8/17/18
APPROVED BY	MR. ELI/8/17/18
DATE	8/17/18
LINER SUBGRADE PREPARATION	
ASH POND LINER REPLACEMENT MIDWEST GENERATION COUNTY GENERATING STATION PONEVILLE, ILLINOIS	
SHEET NO.	0020



CONTRACTOR NOTES:
 1. RECTED AREAS DIMAGED FROM
 EQUIPMENT AND MATERIAL LAYDOWN.

LEGEND	
---	ABOVEGROUND PIPE
---	UNDERGROUND DISCHARGE PIPE
---	OVERHEAD ELECTRIC LINE
---	ANCHOR TRENCH
---	12 OZ. NON-WOVEN GEOTEXTILE
●	MARKER POST LOCATION
□	CONCRETE
▨	WARNING LAYER
▩	HDPE GEOMEMBRANE
▧	RAMP MATERIAL

0 20 40 80
 SCALE IN FEET
 (APPROXIMATE)

THIS DRAWING IS PREPARED FOR THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

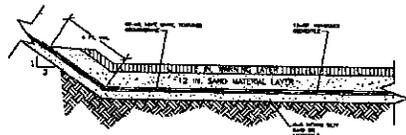
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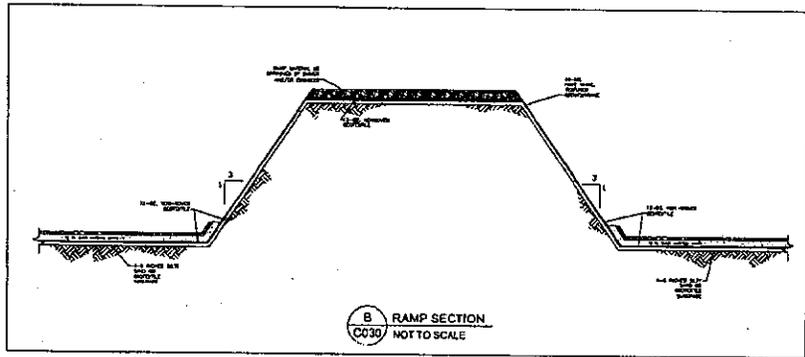
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DESIGNED FOR OTHER			
REVISION		DATE	APP'D BY



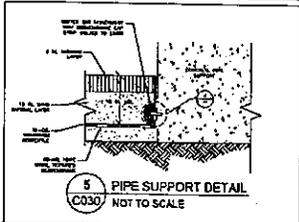
PROJECT NO.	13741
DRAWN BY	RAJ
CHKD BY	RAJ
DESIGNED BY	RAJ
DATE	11/20/08
APPROVED BY	
DATE	
PROJECT TITLE	ASH POND LINER REPLACEMENT MIDWEST GENERATION WILL COUNTY GENERATING STATION RONKOVILLE, ILLINOIS
SHEET NO.	0030



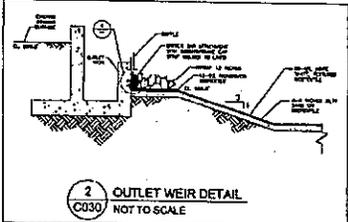
A SLOPE TRANSITION SECTION
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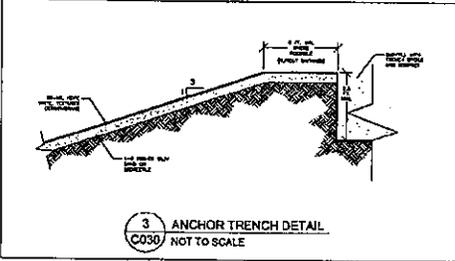
B RAMP SECTION
C030 NOT TO SCALE



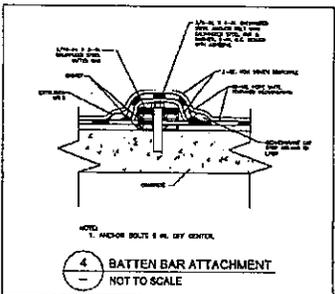
5 PIPE SUPPORT DETAIL
C030 NOT TO SCALE



2 OUTLET WEIR DETAIL
C030 NOT TO SCALE



3 ANCHOR TRENCH DETAIL
C030 NOT TO SCALE



4 BATTEN BAR ATTACHMENT
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PROJECT NO.	13742
DESIGNED BY	BLM/DJ/2008
CHECKED BY	WJ/2008
APPROVED BY	WJ/2008
DATE	08/20/08
REVISION	

NOT FOR CONSTRUCTION
DETAILS AND SECTIONS
ASH POND LINER REPLACEMENT
MIDWEST GENERATION
WILL COUNTY GENERATING STATION
ROMEIOVILLE, ILLINOIS