Lynn,

See my comments below. Let me know if you need anything else.

List of Questions and Needs

Drawings

Questions

- Who developed the Topographic map? Date of the aerial survey? ***Dallas Sluss-*** **I would assume this is from the reservation topo maps.**

Needs

- A CAD file for the 100-year floodplain boundary as shown on Figure 2-1 of the 2005 hydrogeologic report (referenced in NAD 27 state plane coordinates) . ***Colleen Montgomery***
- CAD file showing the Wetland boundary (referenced in NAD 27 state plane coordinates). ***Dave Robinson***
- Location, coordinates and elevations of site benchmarks used for the project. ***Dallas Sluss*** **see attached files**
- Confirmation of the alignment of the overhead towers located to the north of the proposed facility and the corresponding right of away (see attached pdf file titled "Figure 1") ***Dallas Sluss ?*** **We located some towers for Parsons**

Groundwater Monitoring Plan:

Needs

- A copy of existing Groundwater Monitoring plan for the Kingston Facility. ***Larry Bowers***
- The available potentiometric map for the site is June 2005 provided in the 2005 Hydrogeology? Is there a more recent pot map for the site (say December 2005)? Please provide a AutoCAD file for the recent groundwater potentiometric map of the site. ***Hank Julian***

Engineering Design

Needs

- List of geotechnical samples available for additional testing, if needed. ***Lynn Petty***

Dallas Sluss
Team Leader, Surveying Services
PSO - Surveying & Project Services
1101 Market St. MR 4B-C
Chattanooga, TN 37402-2801
http://tpsnet.cha.tva.gov:8039/Documents/ESP%20Org%20Chart/002-013%20ELECTRIC%20SYSTEM%20PROJECTS.pdf = S&PS Organization Chart
Phone: (423)751-2255 - Mobile: (423)718-3880 - MR4 Fax (423)751-6083 - e-mail:dpsluss@tva.gov

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Engineering Design

Needs

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General Questions:

- Does TVA have variance for:
    1. TDEC regulations require that a 200 ft buffer be maintained between the normal boundary of springs, streams and lakes and the fill areas. The current design is within the 200 feet buffer along the southern toe of the filled area of the facility. (buffer range from 156 to 180 ft)
    2. Requirements of a liner system.
    3. Head on the liner being less than 1.0 ft.

- Do we need to prepare a financial assurance for the facility?

List of Questions and Needs

Drawings

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- Who developed the Topographic map? Date of the aerial survey?

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Needs

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Petty, Harold L.

From: Petty, Harold L.
Sent: Tuesday, March 14, 2006 10:48 AM
To: GEOSYNTEC CONSULTANTS INC; 'telkady@geosyntec.com'; Neil
Cc: Bowers, Larry C
Subject: FW: TVA Peninsula

Let's discus

Thanks,
Lynn

-----Original Message-----
From: Montgomery, C. R.
Sent: Thursday, March 02, 2006 4:35 PM
To: Sluss, Dallas P.; Petty, Harold L.; Bowers, Larry C; Julian, Hank; Robinson, Dave W
Cc: Purkey, Ronald E.
Subject: RE: TVA Peninsula

Hello all,

This is my first day back from maternity leave and I'd like to help you out as best as I can with the CAD file of the floodplain boundary that you'd like to have, but I would appreciate a little help getting up to speed so I can get you what you need in a more timely manner. First of all, I don't have a copy of the "2005 hydrogeologic report" referenced in item 1 under NEEDS, below. If someone could send me a copy of it, that would be a good start.

I have actually delineated the floodplain boundary along parts of the peninsula, focusing just on the lost flood storage area from the proposed gypsum ponds. I did this in powerpoint. Right now powerpoint is the closest thing to a CAD package that I have, though I have worked with both AutoCad and Microstation in the past.

A big problem is that the 100- and 500-year flood information for this area of the Clinch River were computed about 30 years ago for a FEMA flood insurance study, therefore any maps that were generated at the time were developed by hand, so there is NO CAD-based map of the floodplain available. What I do have are paper maps of the published FEMA study in this area, and a tabulation of flood elevations at model cross sections that were used in the original 30 year old floodplain model. These flood elevations are stored in our FIMS (flood information management system) database and they are what I based any "mapwork" I did in powerpoint on.

Please let me know the extents of your floodplain delineation needs...preferably by giving me lower and upper bounds for your area of interest in river miles. Then I'll better understand what I'm dealing with.

Thank you,

748.

Colleen Montgomery

-----Original Message-----
From: Sluss, Dallas P.
Sent: Tuesday, February 28, 2006 10:23 AM
To: Petty, Harold L.; Bowers, Larry C; Julian, Hank; Robinson, Dave W; Montgomery, C. R.
Cc: Purkey, Ronald E.
Subject: RE: TVA Peninsula

-----Original Message-----
From: Petty, Harold L.
Sent: Tuesday, February 28, 2006 8:10 AM
To: Sluss, Dallas P.; Bowers, Larry C; Julian, Hank; Robinson, Dave W; Montgomery, C. R.
Cc: Purkey, Ronald E.
Subject: FW: TVA Peninsula

Dallas, Larry, Hank, Dave, and Colleen:

I am forwarding you this e-mail and asking your assistance in answering the questions and/or supplying the items requested to complete the permit application for the Kingston Gypsum Disposal Area located on the peninsula east of the powerhouse.

Your names are listed in Bold Italics besides the areas I believe you can help.

Please review and return your answers or files to me for further handling. I would appreciate your answers by the end of the week.

Thanks,
Lynn Petty

H. L. Petty, P.E.
1101 Market Street
LP 2 G
Chattanooga, TN 37402

423-751-6704
423-751-7094 (FAX)

Ron:

As a follow up to our conference call today, attached is a list of questions and needs to advance the development of the permit application. Please give me a call if you to discuss.

Regards,
Tamer

Tamer Elkady. Ph.D.
1255 Roberts Boulevard NW
Suite 200
Kennesaw, GA, 30144
Phone: 678-202-9500
Direct: 678-202-9567
Fax: 678-202-9501

From: NDavies@GeoSyntec.com
Sent: Friday, March 03, 2006 4:58 PM
To: Julian, Hank
Cc: TElkady@GeoSyntec.com; Petty, Harold L.
Subject: RE: KIF Peninsula: Draft EA

Hank:
We have reviewed Section 3.2.2 as requested. I will send you by separate email a pdf of a couple of pages where we have revised and/or questioned a few of the specific numbers in the test related primarily to areas/volumes etc. The revised numbers are from the current version of the design drawings.

We are not aware of any proposal to place monitoring ports beneath the landfill with horizontal conduits. This has not been discussed with us and I am not sure why one would consider this approach. As I am sure you are aware, the more typical approach is use perimeter wells located downgradient of the landfill and compare data to upgradient conditions. Also, it is typical to screen the wells beneath the geologic buffer, not within it.

There are several places in the report where there is mention of the "liner". Since the design does not incorporate a geocomposite liner, I would recommend against the use of this language. In the documents we are developing we are referring only to the "geologic buffer" which will consist of a 3 foot thick layer of recompacted soil with a design hydraulic conductivity of not greater than 1 x 10-7 cm/sec.

Hank – I hope this helps. If you have any questions, please let us know. I will be out of the country next week but available by email. Tamer Elkady in Atlanta is also working on the project.

Best regards
Neil

From: Julian, Hank [mailto:hejulian@tva.gov]
Sent: Wednesday, March 01, 2006 9:52 AM
To: Neil Davies
Subject: KIF Peninsula: Draft EA

<<KIF_Peninsula_Draft_EA.pdf>>
Please review Section 3.2.2 of the attached draft EA. Does current design of the facility integrate provisions noted in the EA? For instance, the EA states "monitoring ports beneath the landfill would be situated at centroid and peripheral locations with horizontal conduit runs to sampling ports. Perimeter monitoring wells would be installed at critical locations to complement those monitoring locations beneath the landfill. Upgradient wells are currently being installed at higher elevations of the site (ridgeline) that should serve to gauge background groundwater quality. The final groundwater-monitoring plan will be detailed in the facility operations plan." Note that the original design plan for the facility involved some type of liner (e.g. natural low-K soils and/or artificial) with a bottom ash drainage layer and near-horizontal conduits to route water from the drainage blanket to collection pond. To my knowledge, the hydraulic were never modeled.

Thanks,

Hank

Hank E. Julian, P.E., P.G.

hejulian@tva.gov
865.632.6942 (office)
865.632.8375 (fax)

Petty, Harold L.

From: Julian, Hank
Sent: Wednesday, March 08, 2006 3:09 PM
To: GEOSYNTEC CONSULTANTS INC
Cc: Petty, Harold L.; Bowers, Larry C
Subject: KIF Peninsula: March 02, 2006 snapshot

3_2006_snapshot.xls (26 KB)

Neil:

Attached, please find the recent water level snapshot data for the subject site. I am awaiting water level data for wells M, N, and P as well as continuous surface water levels for the Emory/Clinch Rivers (we have a transducer on the river side of the skimmer wall and I had this downloaded).

As shown in attached file, most of the groundwater levels are relatively low compared to previous measurements. This being the case, do you still want a potentiometric map generated? It certainly won't represent seasonal high.

Hank

Hank E. Julian, P.E., P.G.

TVA
Research & Technology Applications
400 West Summit Hill Drive
WT 9C (418)
Knoxville, TN 37902-1401

hejulian@tva.gov
865.632.6942 (office)
865.632.8375 (fax)

KIF Peninsula: Groundwater Elevations

TN State Plane NAD83 (ft) — **03/02/2006**

Well	*easting*	northing	TOC (ft-msl)	TOG Ele (ft-msl)	GW Depth (ft)	GW Ele (ft-msl)	
B	2412581	571957	746.12	743.9	18.48	727.64	*new minimum*
C	2411992	571754	763.84	761.8	23.74	740.10	
E	2411221	571123	767.53	764.5	30.44	737.09	
F	2410489	570887	752.75	749.8	15.87	736.88	
I	2411170	572239	789.61	786.6	30.88	758.73	
M	2411791	572146	767.04	761.8			*awaiting data*
N	2406452	571138	759.13	754.7			*awaiting data*
P	2411901	571205	797.75	792.6			*awaiting data*
MW-10A	2409891	571412	771.87	768.2	33.78	738.09	*new minimum*
MW-10B	2409897	571414	771.61	768.2	33.48	738.13	*new minimum*
MW-21A	2410149	571189	762.34	757.7	25.38	736.96	*new minimum*
MW-44A	2410846	571607	745.00	742.4	7.69	737.31	*new minimum*
MW-44B	2410844	571612	744.04	742.7	6.64	737.40	
MW-47A	2411146	571171	766.38	762.9	29.23	737.15	*new minimum*
MW-63A	2411894	572624	781.96	780.2	21.37	760.59	
MW-63B	2411886	572612	781.76	780.9	25.38	756.38	
MW-66A	2411966	571887	756.39	752.9	18.94	737.45	*new minimum*
MW-74A	2412338	571744	756.01	752.0	18.33	737.68	*new minimum*
MW-77A	2412390	571491	754.37	749.9	13.78	740.59	*new minimum*
MW-81A	2412640	572363	765.25	763.4	27.72	737.53	*new minimum*
MW-81B	2412637	572358	764.27	762.9	26.75	737.52	

data thru 8/5/2

Well	max	min
B	743.9	736.8
C	744.45	737.6
E	746.43	734.67
F	749.17	736.15
I	771.38	755.28
MW-10A	742.19	741.49
MW-10B	741.45	741.26
MW-21A	741.01	740.80
MW-44A	741.12	740.83
MW-47A	741.25	740.80
MW-63A	763.38	755.54
MW-66A	741.55	740.98
MW-74A	741.52	740.92
MW-77A	741.29	740.69
MW-81A	741.42	740.97

005

average
740.26
740.82
739.56
739.85
758.92
741.84
741.36
740.91
740.98
740.96
759.46
741.17
741.15
740.93
741.20

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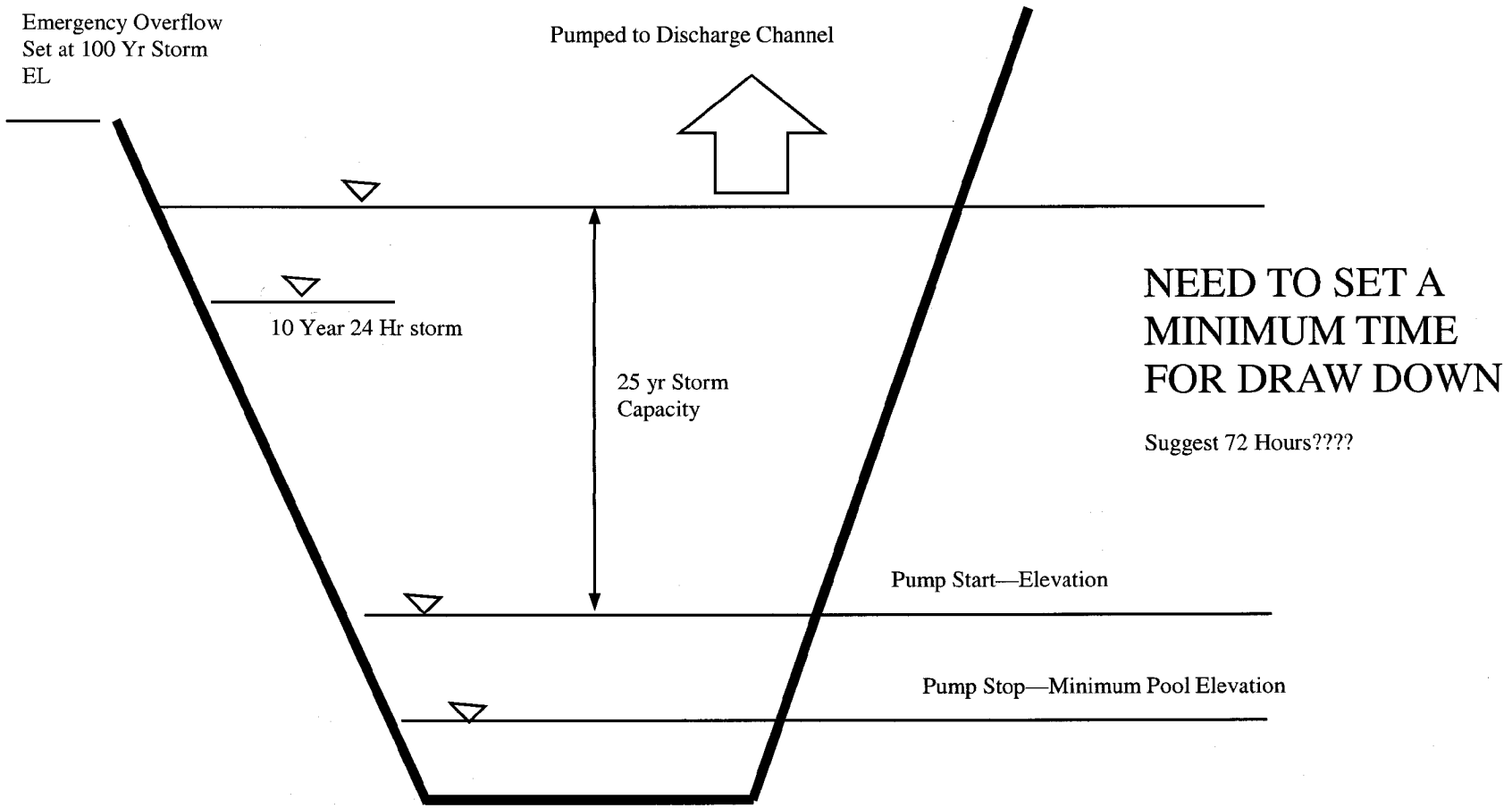
- List of geotechnical samples available for additional testing, if needed. ***Lynn Petty***

KIF - GYPSUM DISPOSAL STORMWATER POND



NEED TO SET A MINIMUM TIME FOR DRAW DOWN

Suggest 72 Hours????