

Vogle PEmails

From: Davis, James T. [JTDAVIS@southernco.com]
Sent: Thursday, August 21, 2008 6:31 PM
To: Christian Araguas
Cc: Pierce, Chuck R.
Subject: FW: AR-08-1286 Part 2
Attachments: AR-08-1286_RAI Ltr #11 Hyd_Resp_FINAL_PART 2.pdf

Jim Davis
Southern Nuclear
ESP Project Engineer
205.992.7692 Office
205.243.9823 Cell/Blackberry
205.253.1248 Cell
205.992.5296 Fax
Mailing Address
Post Office Box 1295, BIN B056
Birmingham, AL 35201
Street Address
Building 40
Inverness Center Parkway
Birmingham, AL 35242

From: Williams, Dana M.
Sent: Thursday, August 21, 2008 5:22 PM
To: Davis, James T.
Subject: AR-08-1286 Part 2

<<AR-08-1286_RAI Ltr #11 Hyd_Resp_FINAL_PART 2.pdf>>

Dana M. Williams
Southern Nuclear Operating Company
Nuclear Development
40 Inverness Center Parkway
Bin B056
Birmingham, AL 35242
P 205.992.5934
F 205.992.5296

Hearing Identifier: Vogtle_Public_EX
Email Number: 83

Mail Envelope Properties (25D451237887BA41B1B921CCC461E43C032C6AD4)

Subject: FW: AR-08-1286 Part 2
Sent Date: 8/21/2008 6:31:20 PM
Received Date: 8/21/2008 6:32:28 PM
From: Davis, James T.

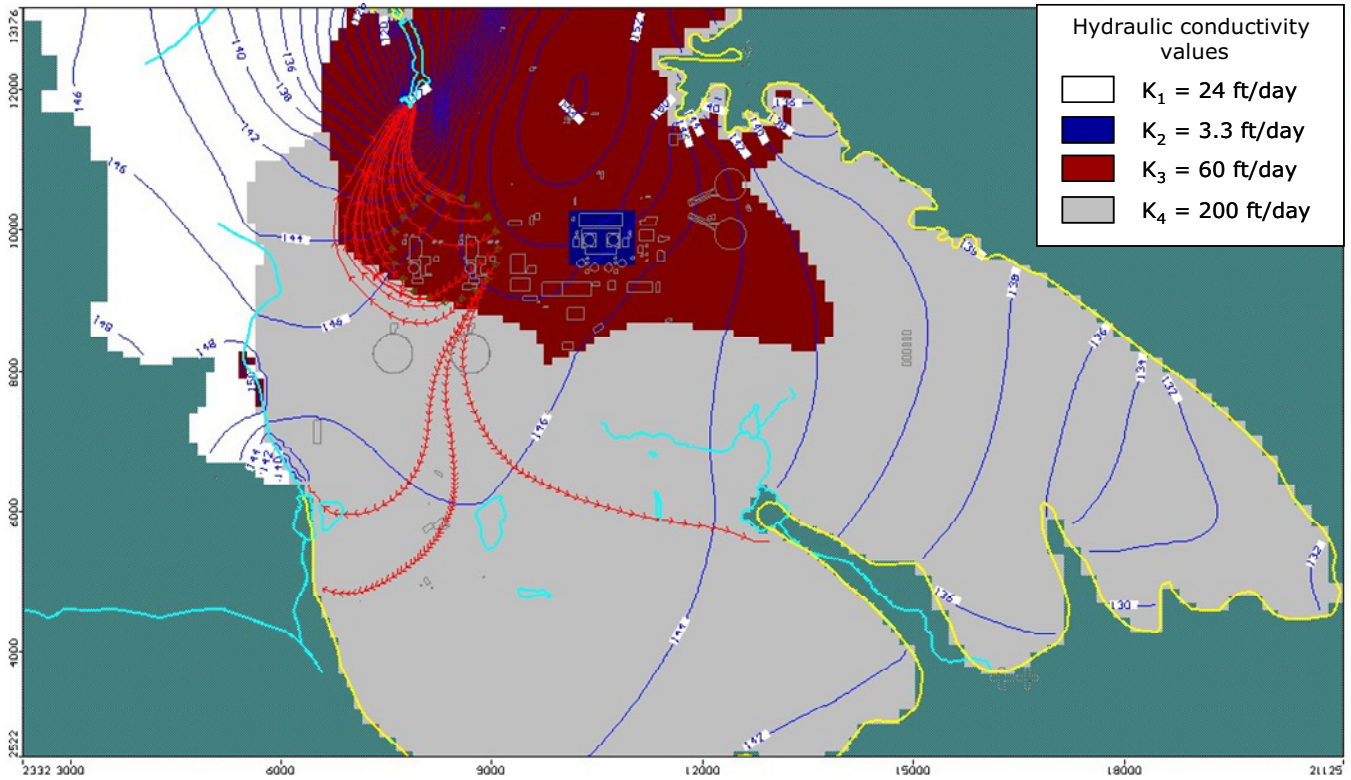
Created By: JTDAVIS@southernco.com

Recipients:
"Pierce, Chuck R." <CRPIERCE@southernco.com>
Tracking Status: None
"Christian Araguas" <Christian.Araguas@nrc.gov>
Tracking Status: None

Post Office: ALXAPEX46.southernco.com

Files	Size	Date & Time
MESSAGE	690	8/21/2008 6:32:28 PM
AR-08-1286_RAI Ltr #11 Hyd_Resp_FINAL_PART 2.pdf		3973475

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:



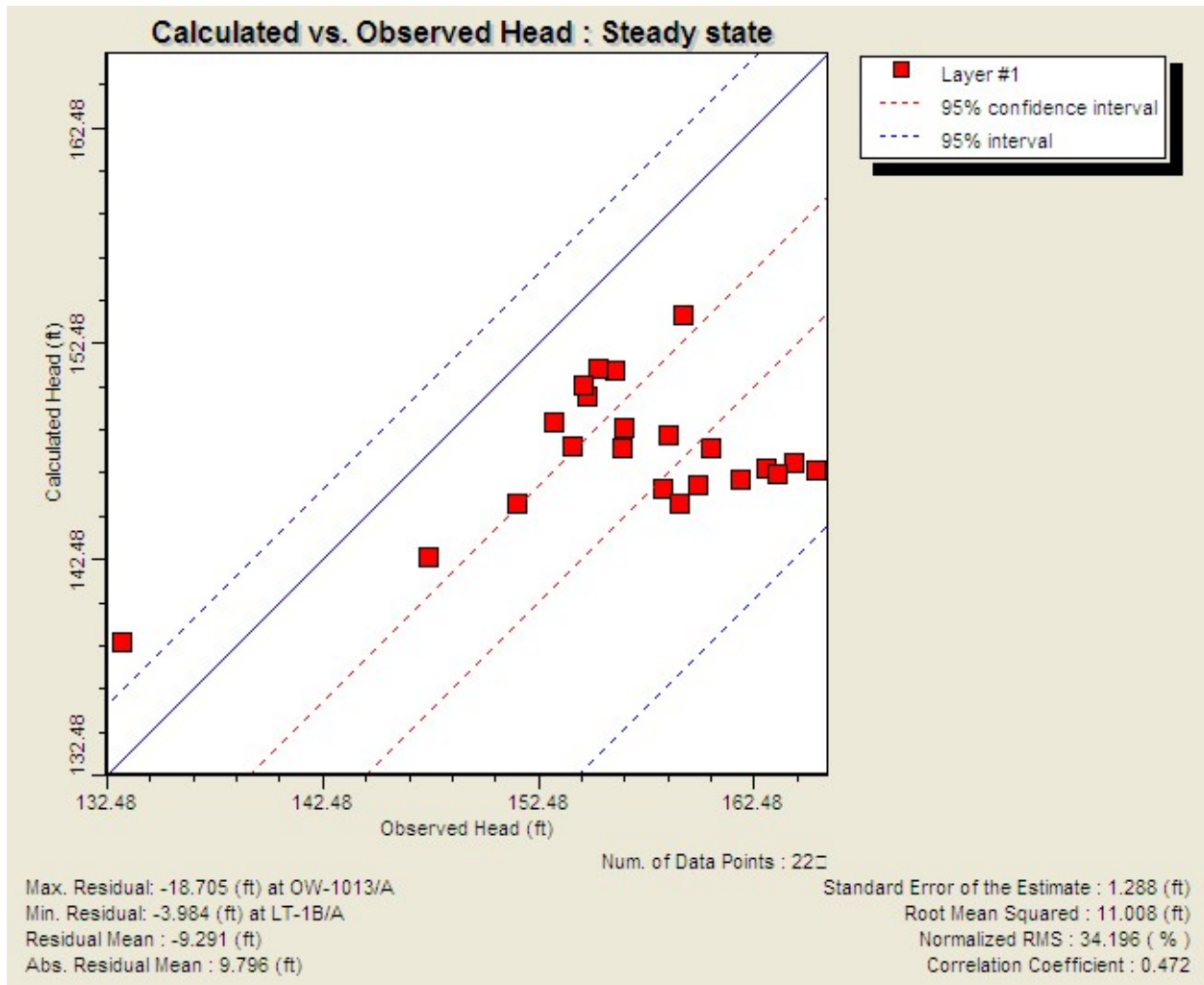


Figure 11 - Comparison of observed and computed heads for the hydraulic conductivity distribution shown in Figure 10.

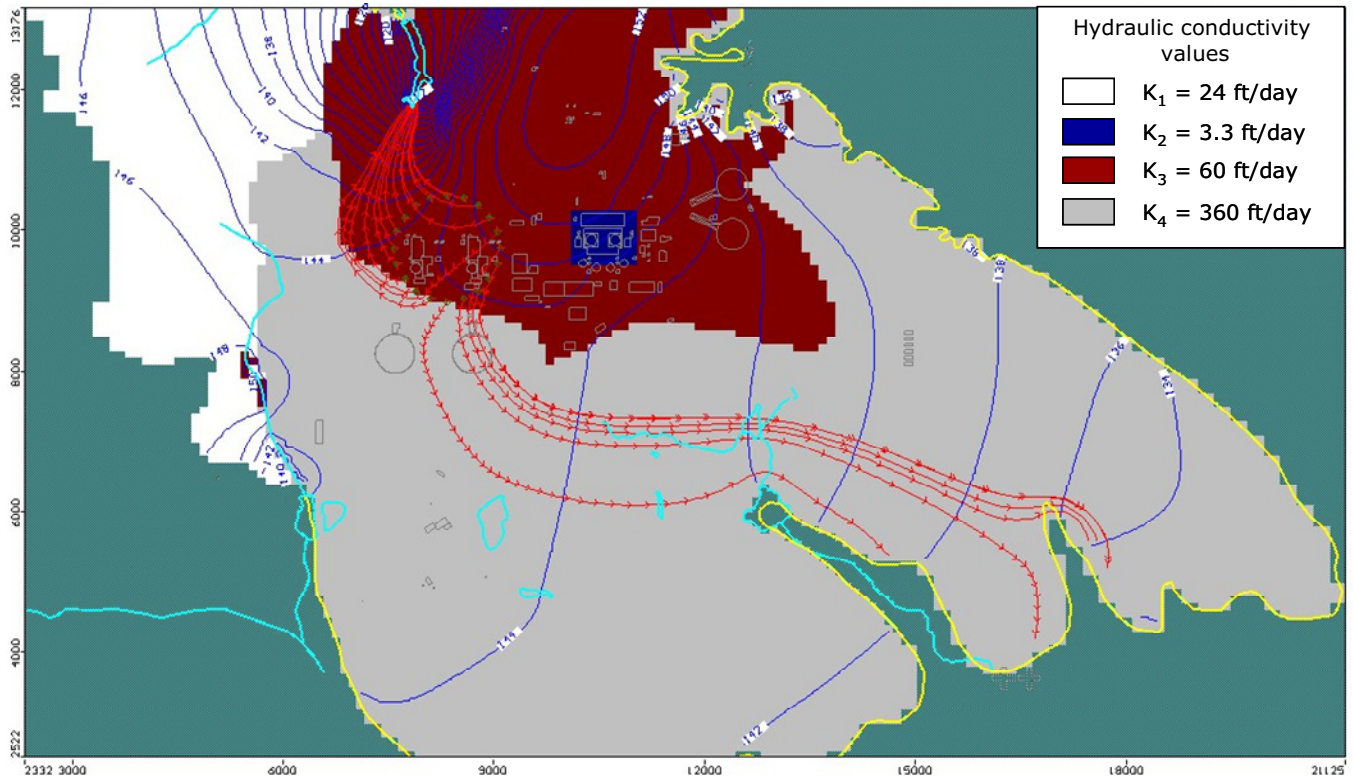


Figure 12 - Simulated heads and particle tracking for a hydraulic conductivity distribution that produces groundwater pathways to the south.

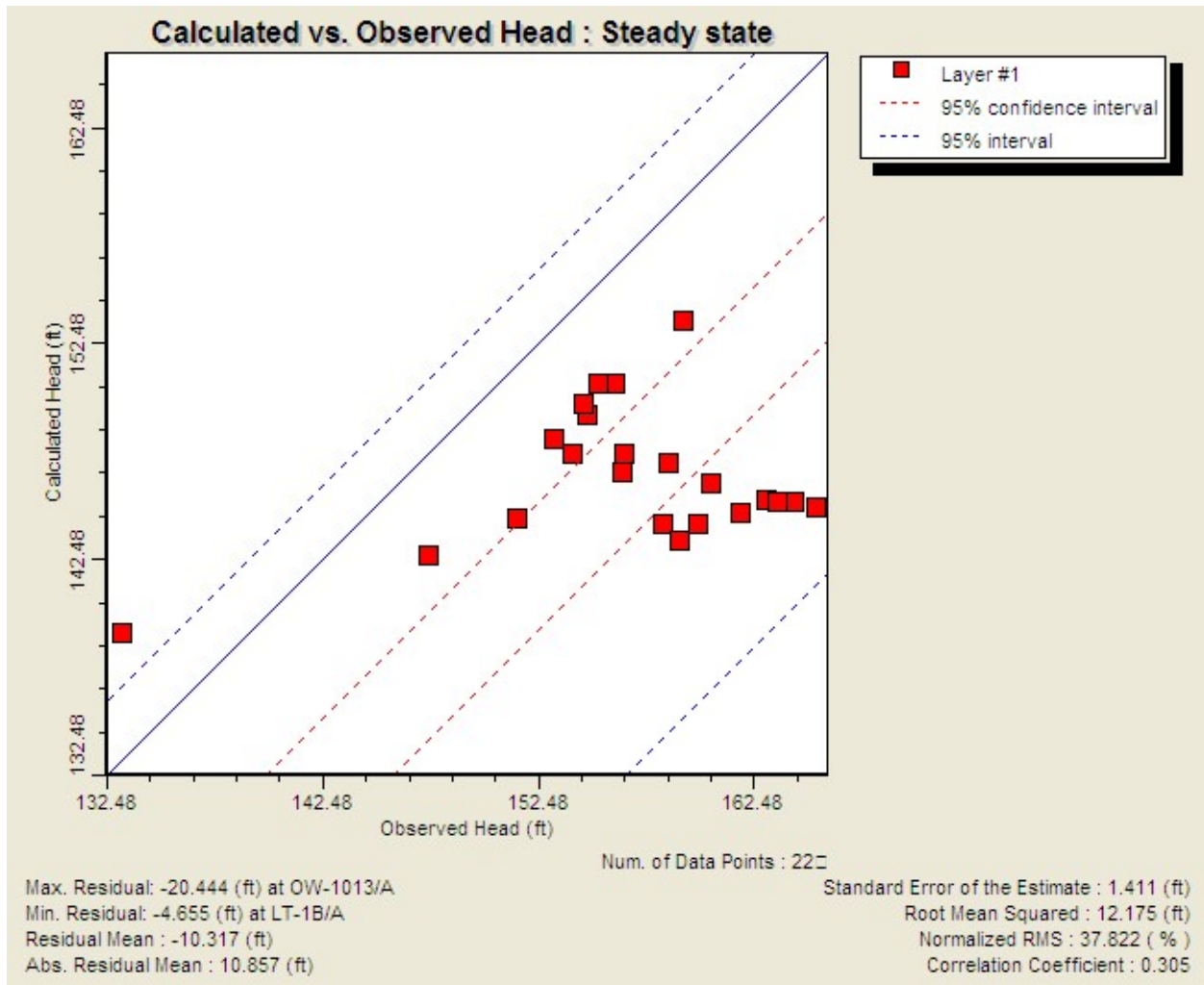


Figure 13 - Comparison of observed and computed heads for the hydraulic conductivity distribution shown in Figure 12.

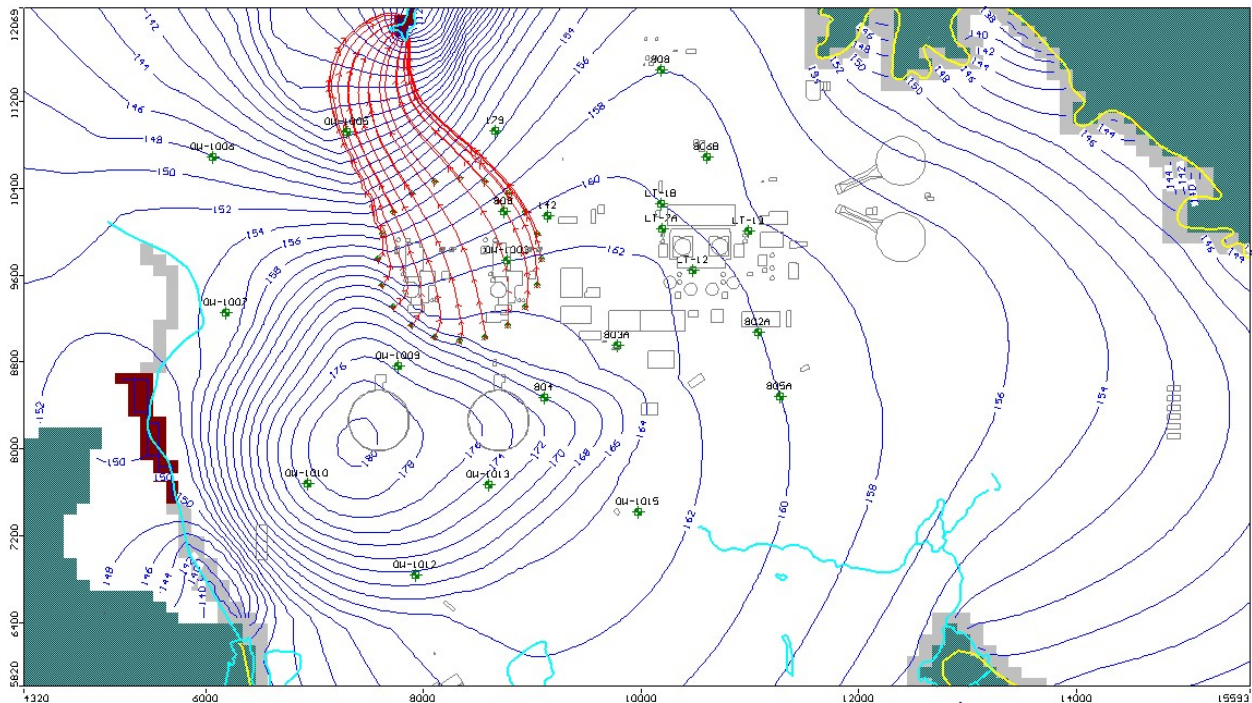


Figure 14 - Simulated heads and particle tracking with the baseline model, using the recharge distribution shown in Figure 9, and increasing the recharge in zone R₇ to 48 in/yr.

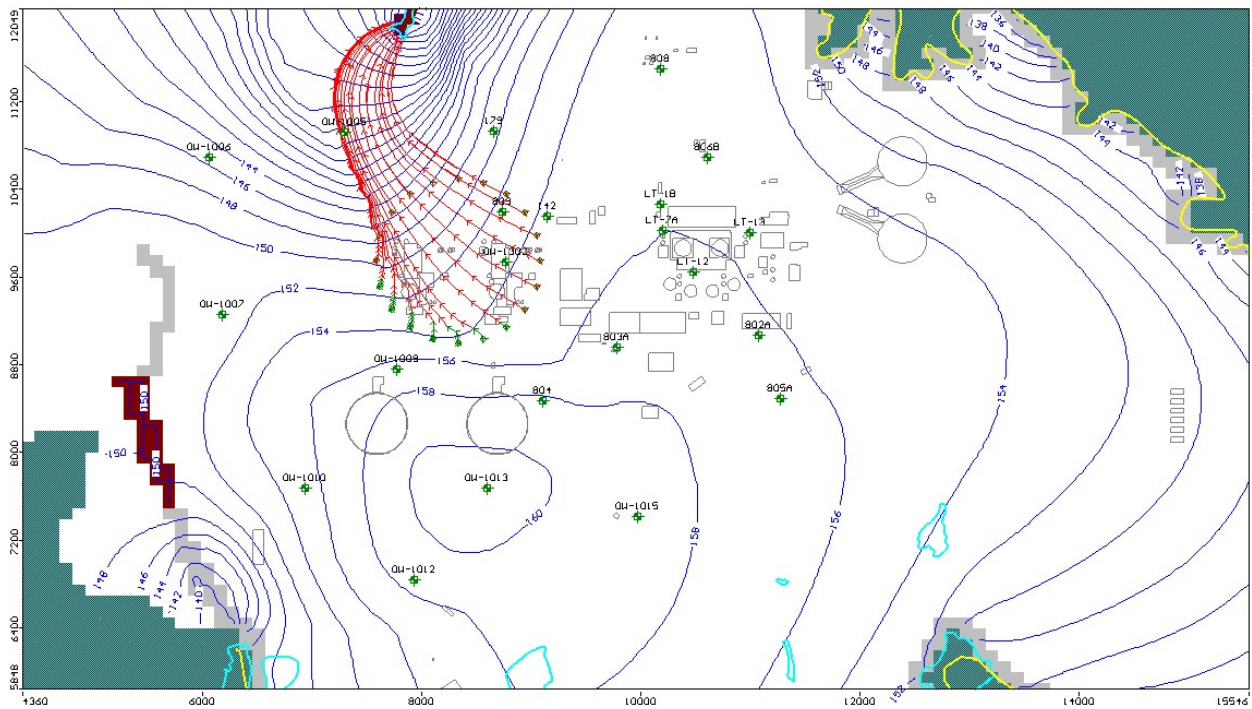


Figure 15 - Simulated heads and particle tracking with the baseline model, using the recharge distribution shown in Figure 9, and decreasing the recharge in zone R₇ to 0 in/yr.

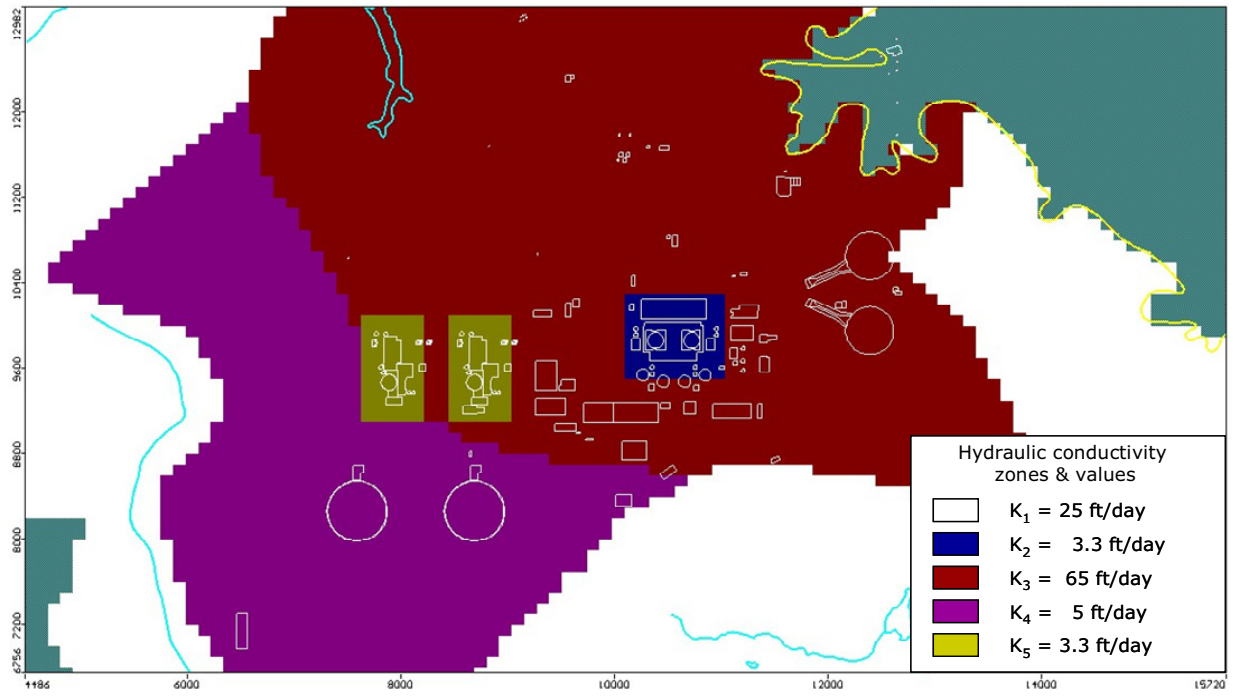


Figure 16 - Hydraulic conductivity zones for post-construction conditions.

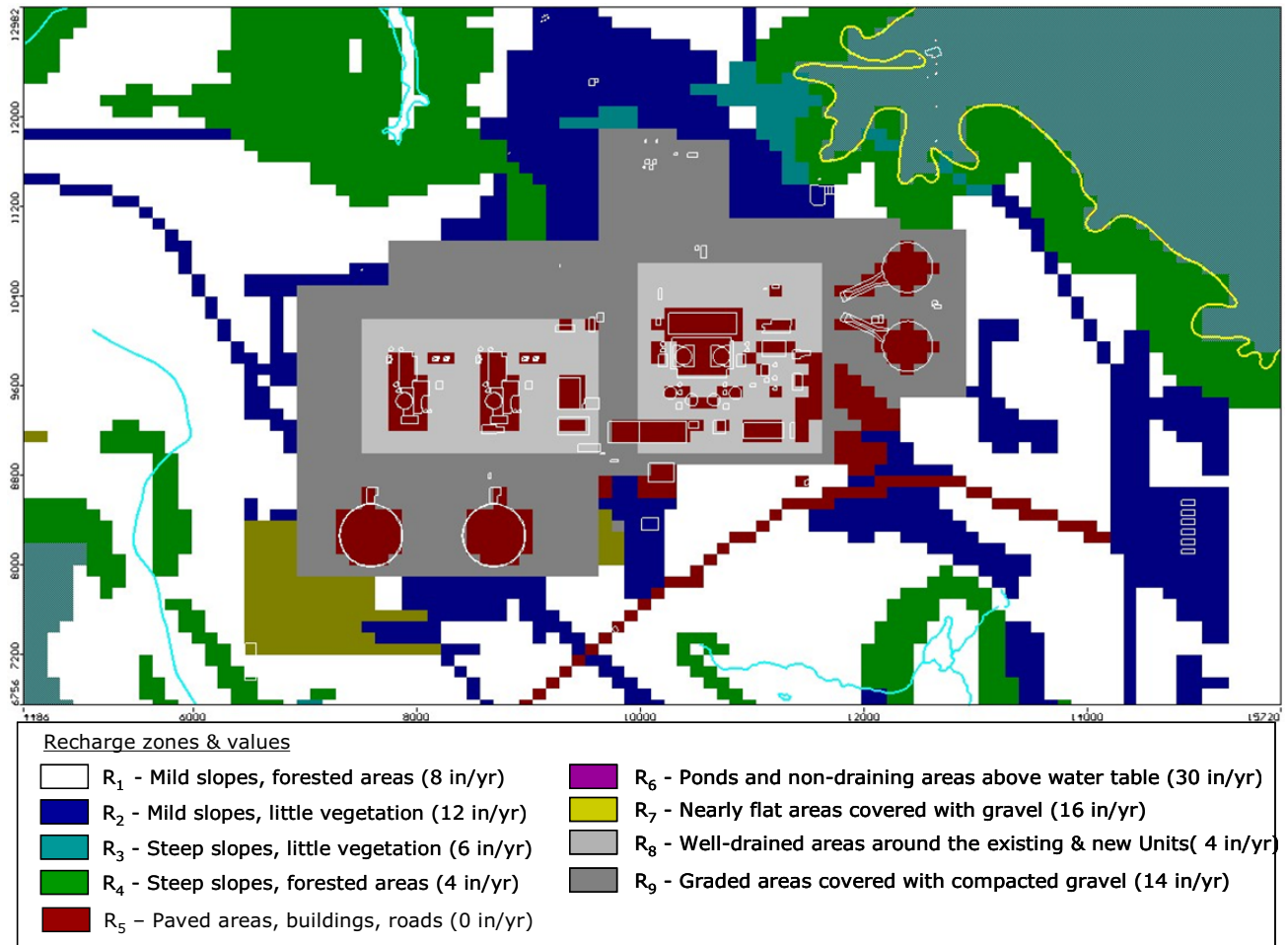


Figure 17 - Recharge zones for post-construction conditions

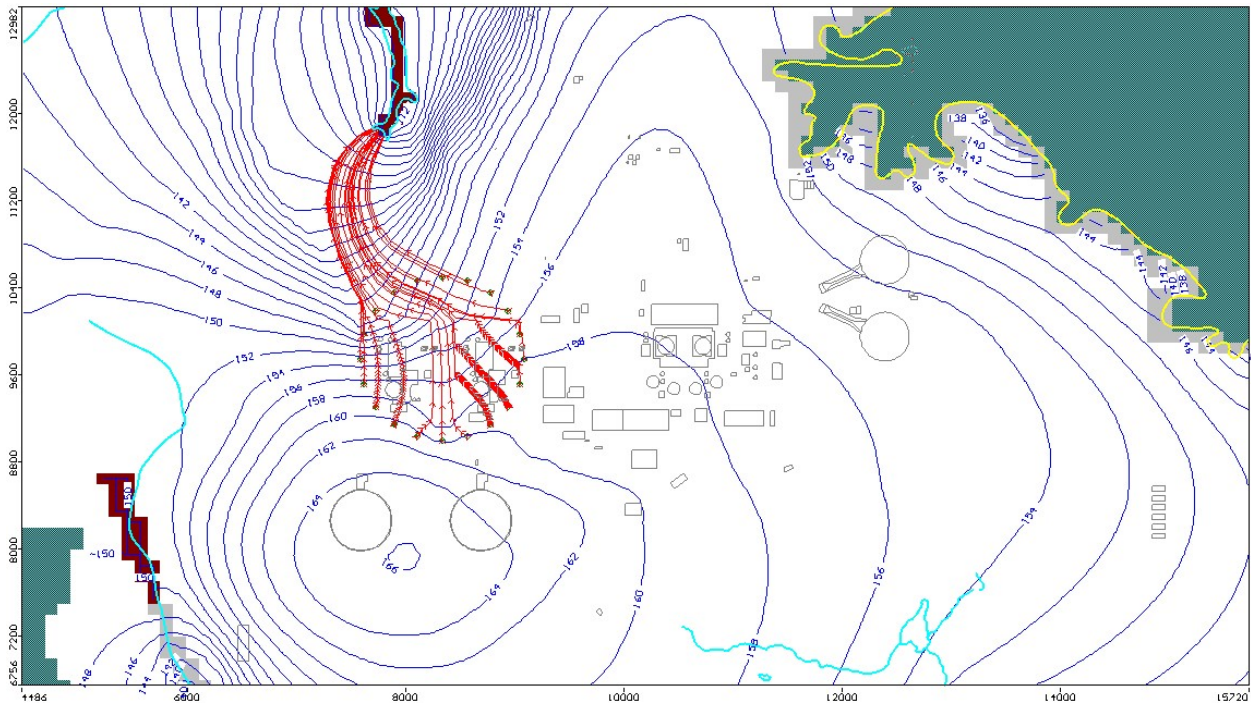


Figure 18 - Particle tracking under post-construction conditions. 20 particles are released along the periphery of 750-ft radius circle around the power block

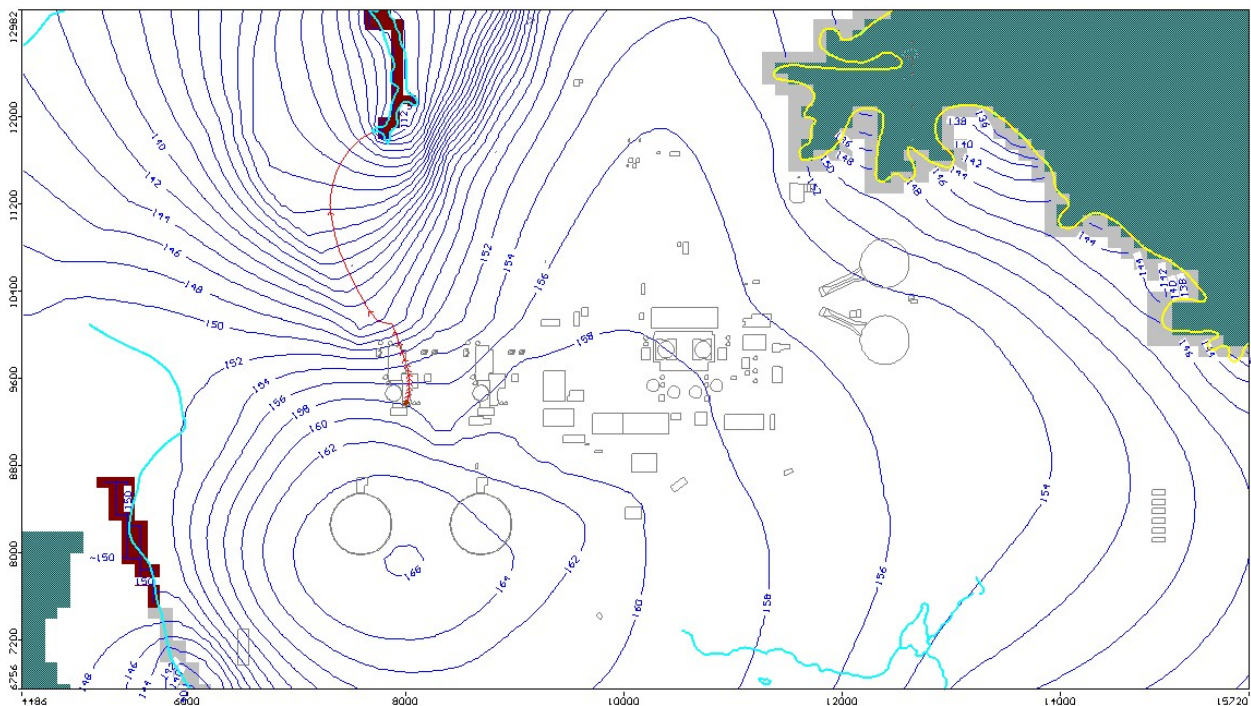


Figure 19 - Particle tracking under post-construction conditions. A particle is released at the auxiliary building of Unit 4.

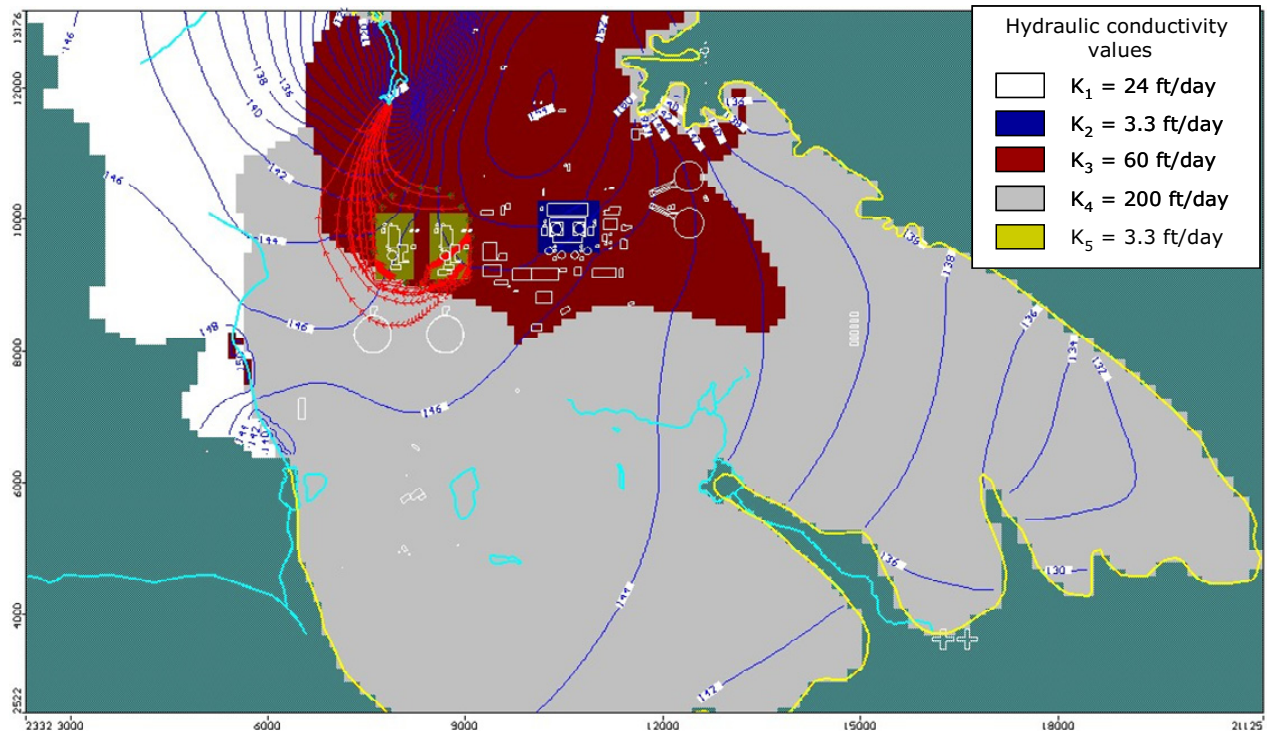


Figure 20 - Particle tracking for post-construction conditions using the same hypothetical high conductivity zone as in the simulation of Figure 10

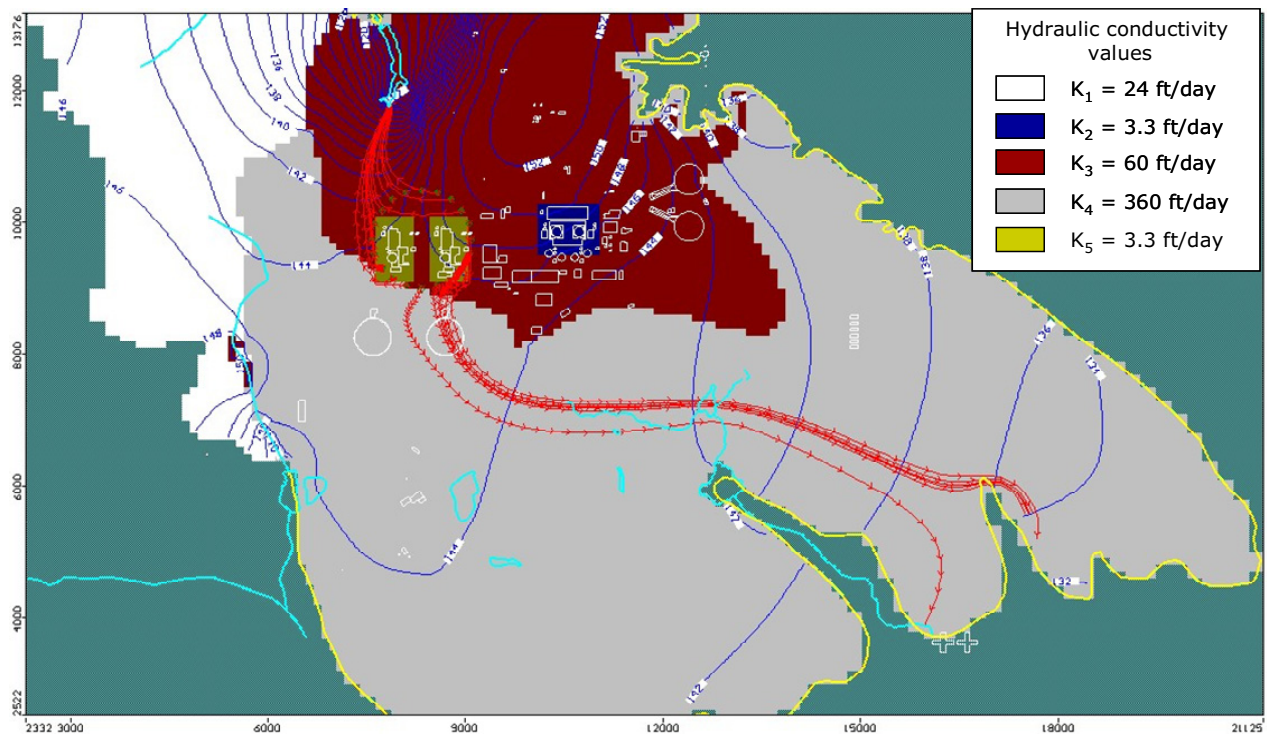


Figure 21 - Particle tracking for post-construction conditions using the same hypothetical high conductivity zone as in the simulation of Figure 12

Southern Nuclear Operating Company

AR-08-1286

Enclosure 2

Groundwater Model Input / Output Files

(C/D)

Southern Nuclear Operating Company

AR-08-1286

Enclosure 3

Updated SSAR Appendix 2.4B Revision 4-S2 Figures

Note: This enclosure includes four figures.

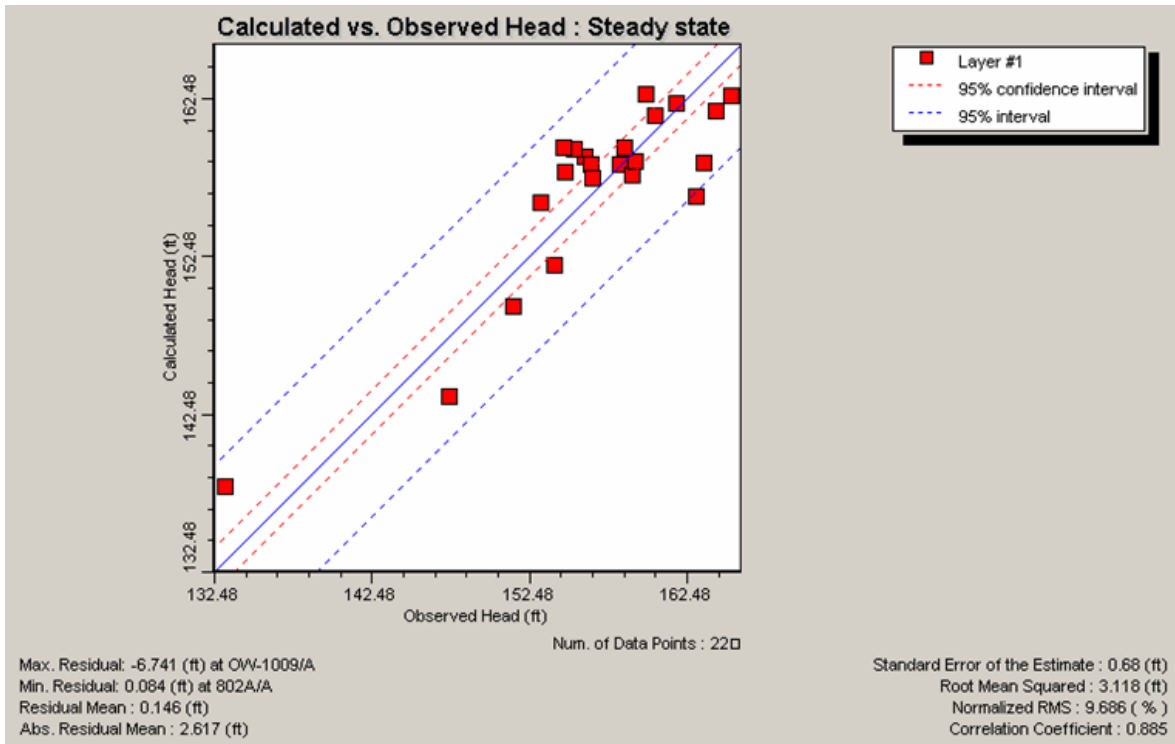


Figure 47: Model 7 - Simulated vs. observed water levels for Run 708 ($K_1=32$; $K_2=100$; $K_3=8$ ft/day; $R_1=10$; $R_2=6$; $R_3=6$; $R_4=4$; $R_5=0$ in/yr)

GROUNDWATER MODEL DEVELOPMENT & ANALYSIS

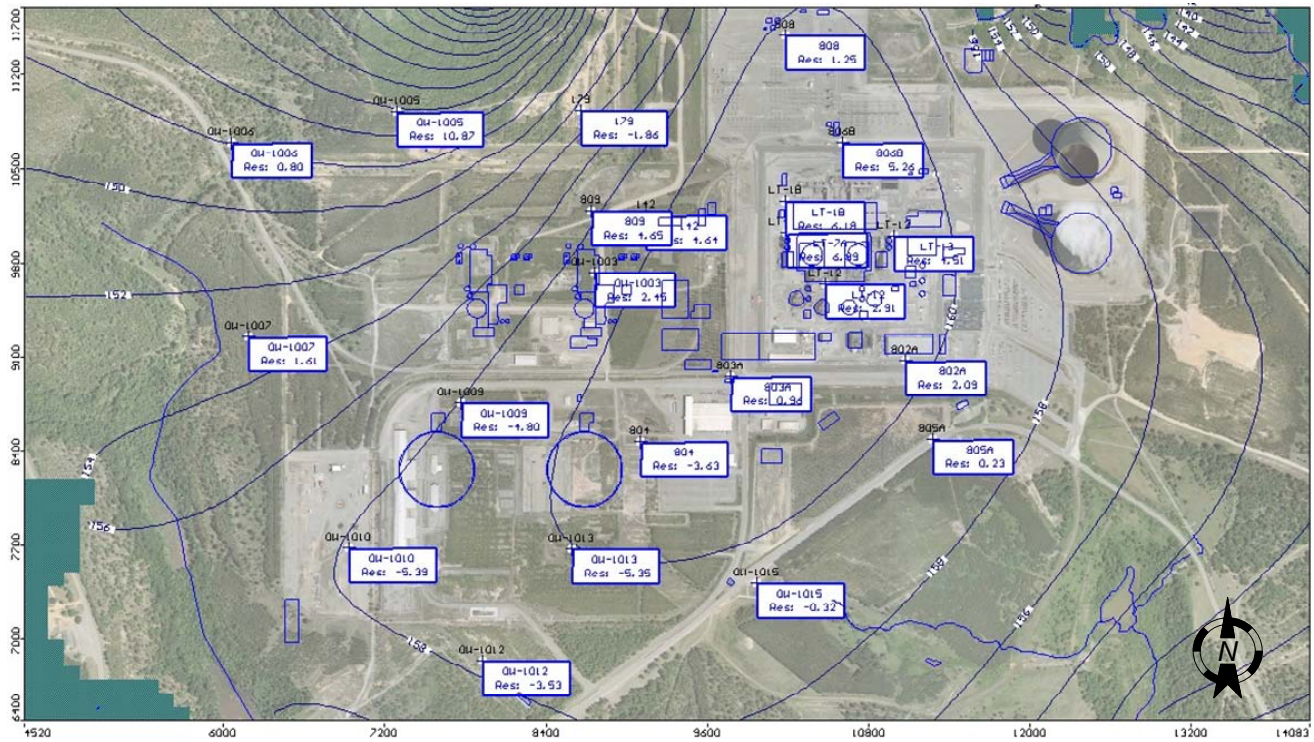


Figure 32: Model 3 - Estimated residuals for Run 305 ($K_1=27$; $K_2=20$; $K_3=30$; $K_4=60$ ft/day; $R_1=10$; $R_2=6$; $R_3=6$; $R_4=4$; $R_5=0$ in/yr)

GROUNDWATER MODEL DEVELOPMENT & ANALYSIS

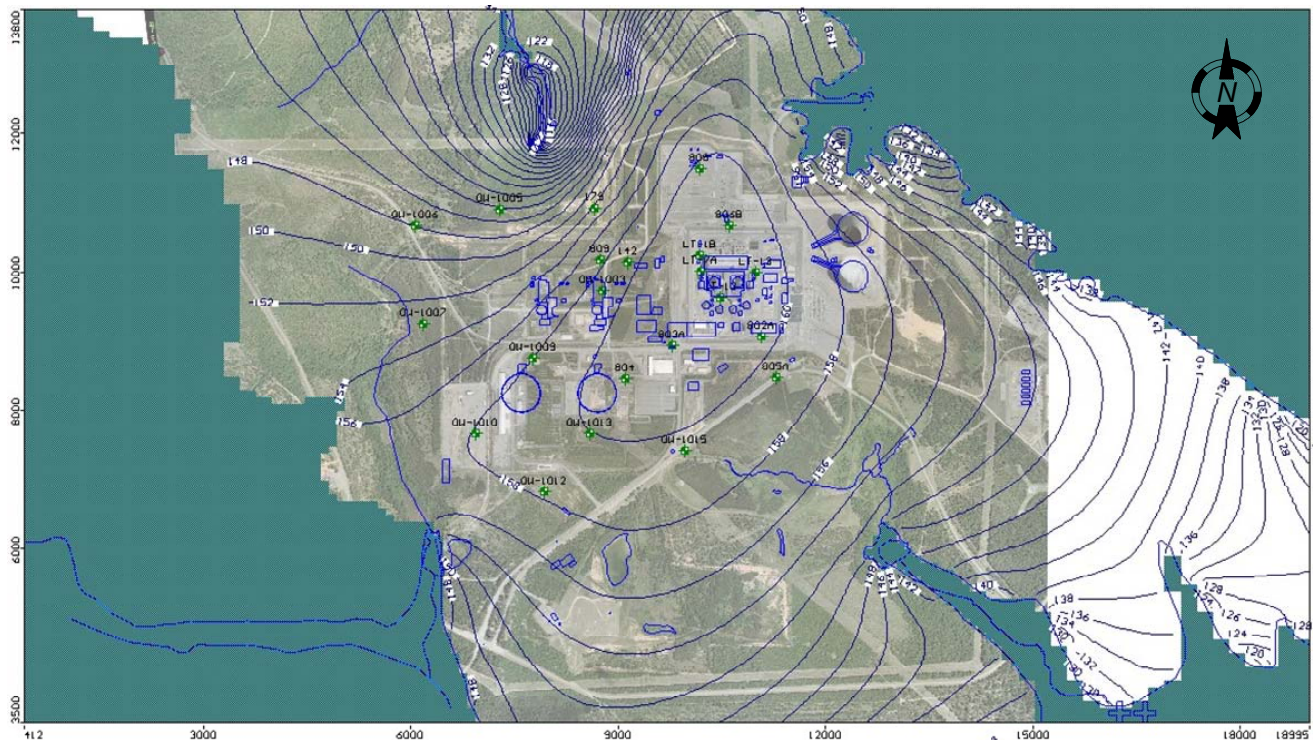


Figure 30: Model 3 - Simulated water levels for Run 305 ($K_1=27$; $K_2=20$; $K_3=30$; $K_4=60$ ft/day; $R_1=10$; $R_2=6$; $R_3=6$; $R_4=4$; $R_5=0$ in/yr)

GROUNDWATER MODEL DEVELOPMENT & ANALYSIS

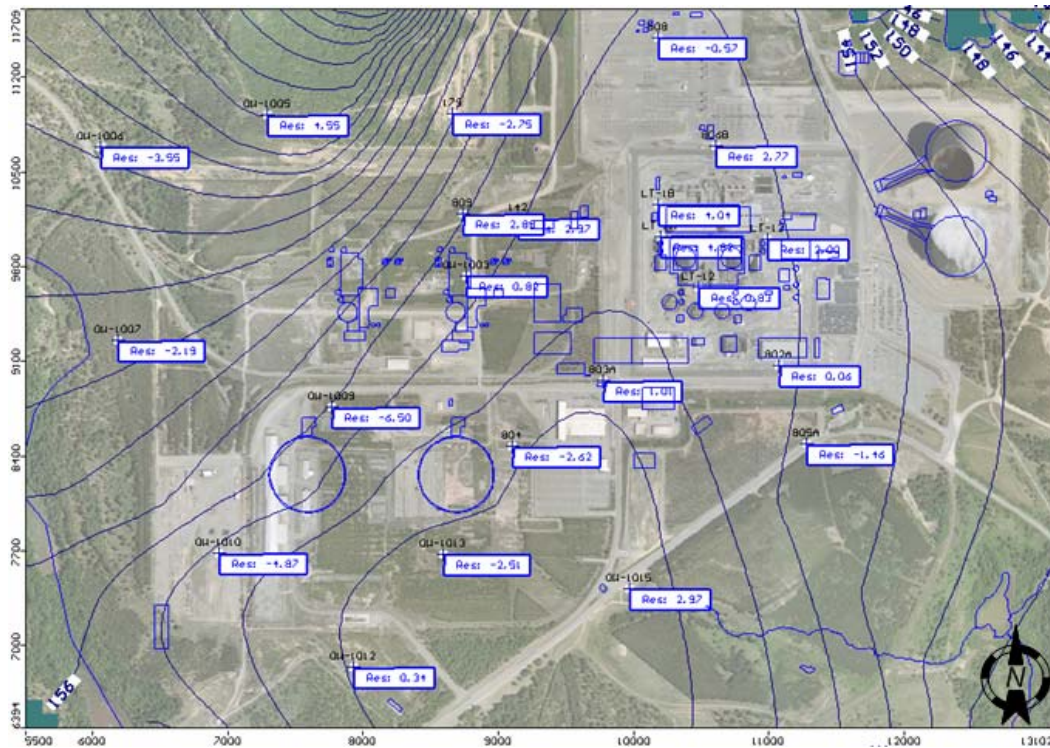


Figure 48: Model 7- Estimated residuals for Run 708 ($K_1=32$; $K_2=100$; $K_3=8$ ft/day; $R_1=10$; $R_2=6$; $R_3=6$; $R_4=4$; $R_5=0$ in/yr)