How to Access the Testing Versions of the Hydrogeology Challenge and Request a Results URL

Beginning Level (5 well simulation)
http://groundwater.beehere.net/#test/02671056-98a3-4f70-8469-3fd6490195e6

Medium Level (6 well simulation)
http://groundwater.beehere.net/#test/7bfbbe10-e647-44f9-b121-8d4298815b1b

High Level (10 well simulation)
http://groundwater.beehere.net/#test/f140dfe9-22f4-4370-8cbc-05f6a6b928fd

For Teachers Requesting a Test/Results URL
Email your request to info@groundwater.org at least 1 week in advance.

"Hello,
I have attended a previous training and am an educator at **[your school's name].** I am using the Hydrogeology Challenge online testing version on **[due date of assignment/project or conclusion of unit]**.
I am requesting a unique results URL for **[Name of Class 1]**, **[Name of Class 2]**, **[Name of Class 3]**.
Thank you,
[Your Name]

How to Create an Applied Knowledge Scenario from The Groundwater Foundation's Hydrogeology Challenge

1) Identify a well within the map that will be the source of contamination. In the online version, this is best accomplished by choosing one of the wells that was used to calculate the final horizontal velocity.
2) Identify at least 2 wells to turn the pumping on. Ideally, at least one of these wells is near enough to contaminant source to significantly influence the horizontal velocity and flow direction calculated from the map. The contaminated well can also have its pumping activated.
    a. For results that are more representative of reality: Qualitatively assess the change in flow direction given the new pumping wells but continue to use experimentally determined gradient and velocity from map.
    b. For experimentally precise results: Run the model again using the point of contamination and at least one of wells closest to the contaminated well that also has pumping turned on.
3) Identify all wells that are now threatened by the contamination plume given the adjusted direction.
4) Set tasks for your students to solve. This may include discovering:
    a. How long it will take the plume to reach the nearest well in danger of contamination, or
    b. How long it will take the plume to reach the farthest well in danger of contamination, or
    c. How the plume and other wells will be affected if pumping is turned on/off at a given well.
5) Identify a type of contamination as well as remediation techniques that will and will not work to fix it.
6) Set tasks for your students to investigate the contaminant and remediation techniques. These may include investigations into the:
    a. Definition
    b. Type and qualities (of remediation: chemical, physical, thermal, etc.; of contaminant: SVOC, VOC, inorganics, etc.)
    c. EPA/state regulations
    d. Cost analysis of remediation techniques
    e. Assessment and recommendation for "community leaders" to clean the up the contaminant.
    f. Assessment and recommendation for "community leaders" to take preventive measures against future contamination