It appears that there were microenvironments favorable to acidity production in the columns of these labs, that were absent from Lab 1 and some of the other labs as shown on Figure 7.7 and 7.8.

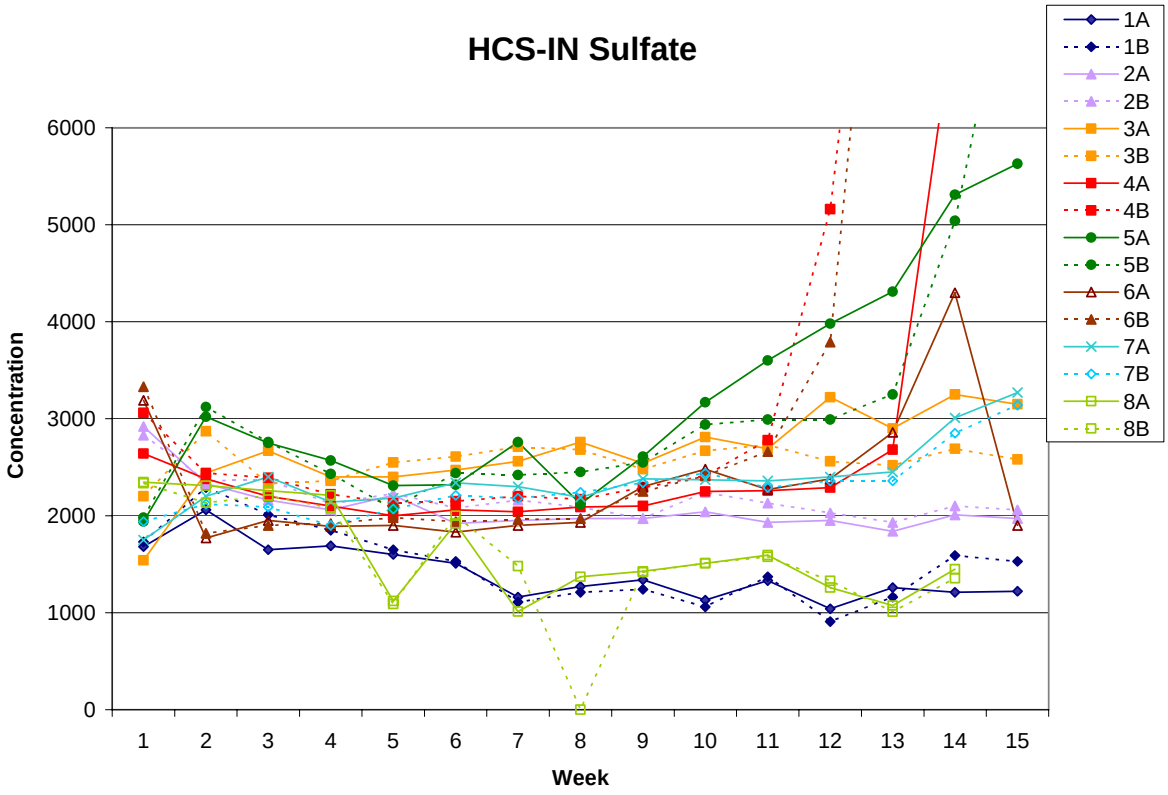

Figure 7.8. Sulfate in effluent from duplicate columns of Houchin Creek Shale.

The conductivity of the leachate is an excellent indicator of the amount of dissolved ionic species in the leaching column effluent. Figure 7.9 shows the conductivity of the 8 labs for the LKFC-PA sample. Week 1 consistently had the highest conductivity of the series after which the values gradually decreased through the 14 week period. Lab 7 had much higher conductivity values than the other seven labs. The pattern of variation for these seven labs is very similar, and the duplicate samples of each of the labs are close together. The pattern of variation for sulfate shown in Figure 7.10 is very similar to that described for conductivity above. A large part of the reasons for that similarity in conductivity and sulfate from the LKFC-PA rock sample is that sulfate is the dominant anion in the leachate.