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**Sent:** Wednesday, December 17, 2014 3:57 PM  
**To:** Esser, Brad  
**Cc:** Borkovich, John@Waterboards; Bishop, Jonathan@Waterboards  
**Subject:** Comments on Groundwater Monitoring plan

Brad: You asked me to put my comments made last week at the workshop into writing, so this is for that. I thought the workshop was well-run and useful. Thank you.

Bill Allayaud  
California Director of Government Affairs  
Environmental Working Group

Subject: Comments on the Establishment of Groundwater Monitoring Program Pursuant to Senate Bill 4

- Having monitoring covering an area greater than just the immediate area having a well stimulation treatment (WST) is necessary. In some oil fields, there would be not significant oil production without the initial WST. Therefore, monitoring the greater field is important, as well casing failures can occur at any time and in any well.
- It is important that monitoring be done within an oil field, not just on the edges to see, in effect, if pollution is leaving the confines of the field. Because they may be domestic well, agricultural wells, or usable groundwater within the boundaries of the oil field, it is important to see if pollution is occurring within the field, not just at the edges. A good example is the Shafter area where wells are in the middle of orchards and near residences.
- Open pits, or sumps, should not be characterized as "legacy" if they are being actively used. While they may be being phased out over time, if millions of gallons are currently being poured into them, they are active sumps, not legacy sumps. Let's characterize them as such and not pretend like they are something from the past that is gone, or innocuous, etc.
- Well casing failures are not systematically reported to DOGGR or tracked by DOGGR. This is an important shortcoming of the agency's entire permitting and tracking scheme. It is important to establish such a database now that can be sorted by operator, county, oil field, depth, proximity to groundwater, time, or geologic formation.
- Another pathway for entry of toxic chemicals into groundwater or surface water is from spills from activities occurring on the ground around the well, such as a tanker truck overturning.
- The industry continues to emphasize that WSTs in California are vertical in nature. However, significant horizontal WSTs have occurred, are occurring, and will occur in the future.
- We should not forget that wells have been and can be fracked in northern California. Groundwater is more likely to be near the surface in northern California, to be thicker in depth, and be of high quality. We know of at least 19 wells being fracked solely for natural gas (not oil). While the predominance of fracking occurs in Kern County, let's not forget the importance of monitoring all wells whether in Kern, Butte, or Ventura counties.