IOWA DEPARTMENT OF NATURAL RESOURCES

GOVERNOR KIM REYNOLDS
LT. GOVERNOR ADAM GREGG
ACTING DIRECTOR BRUCE TRAUTMAN

August 29, 2018

BRIAN HAINES
ESSENTIA PROTEIN SOLUTIONS
2425 SE OAK TREE COURT
ANKENY IA 50021

Re: Monitoring Well Installation and Groundwater Monitoring Results – December 2017, Essentia Protein Solutions (formerly Proliant) Facility, Harlan, Iowa dated July 27, 2018

Dear Mr. Haines:

The Iowa Department of Natural Resources, Contaminated Sites Section, has reviewed the above referenced monitoring results submitted by WSP on behalf of Essentia Protein Solutions and has the following comments:

- Prior to the December 2017 sampling event Iowa DNR was notified the newly installed MW-5 was re-designated as MW-16; however, the Pace Analytical laboratory report still listed the monitoring well as MW-5. This should have been noted in the text.

- Table 1 did not include the Pace Analytical results for the Equipment Blank. The analytical results indicate a problem with the Equipment Blank in that it showed elevated levels of sodium and chloride. this information should have been discussed in the text and recorded in Table 1.

- The dissolved oxygen values may be suspect due to problems with the DO meter as documented in the field noted. This information should have been discussed in the text.

- Monitoring wells MW-1, MW-2, MW-3 and MW-16 were used to calculate the groundwater flow direction. As noted in Figure 2 and Figure 3, MW-1 and MW-3 are not appropriate hydrological points for measuring groundwater flow in the aquifer in question. Even MW-2 may be too far away for a small river alluvium aquifer. Iowa DNR agrees the groundwater flow will have mainly a westerly flow but the information found in Figure 4 cannot be validated with the information provided.

- Iowa DNR agrees the west well field is not impacted by activities at the Essentia site and no addition environmental actions are required for the west well field. Iowa DNR also agrees with your conclusion that there is no need for the aquifer pump test.

- IDNR agrees the sodium and chloride levels in MW-1 may be due to road salt applications but not Municipal Wells 4 and 5.

Overall, the evidence suggests that Municipal Well 4 and 5, and possibly other wells in the east well field, may be impacted from releases at the Essentia site. Looking at the historical monitoring data the ammonia release has the appearance of a past release but the sodium and chloride levels may be from a more recent release. This conclusion is also supported with the inferred groundwater flow direction. At this time additional groundwater monitoring will be required to determine the stability of the plume and to help determine if remedial actions are needed. MW-16, Municipal Well 4, and Municipal Well 5 will need to be monitored annual to determine the ammonia, sodium, and chloride trends. This will also include sampling for nitrate and the stabilization parameters. If the City of Harlan does not agree to the use of wells 4 and 5 as monitoring points then additional monitoring wells may be required. Also, a monitoring point may be needed on site closer to the process areas.

It is understood that MW-1, MW-2, MW-3, and MW-4 are monitored annual as part of your land application requirements. The monitoring requirements of this letter can be aligned with the land application requirements for one annual site mobilization.

The monitoring results document referenced above does not need to be resubmitted but a monitoring plan and schedule will need to be submitted within 30 days of receiving this letter. If you have any questions or need further information please feel free to call or e-mail at (515) 725-8371 or dan.cook@ dnr.iowa.gov.

Sincerely,

Daniel Cook
Environmental Specialist Senior
Contaminated Sites Section

c: Roscoe Sopiwnik, WSP, 8 Pine Tree Drive, Suite 250, St. Paul, MN 55112
Alison Manz, Iowa DNR Field Office 4