



CON 12-15  
Doc #29001

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
CHUCK GIPP, DIRECTOR

December 27, 2013

Mark Cross  
Cross Roads Land Development LLC  
P.O. Box 80  
Camanche, IA 52730

RE: Former PCS Nitrogen Site (PCS Site)

Mark,

It was good meeting with you recently regarding activities at the PCS Site under Consent Order No. 2003-HC-03 (the consent order) as amended.

As we discussed, we have reviewed the monitoring data, which you have submitted in accordance with the consent order. When the consent order was originally signed in 2003 contaminant levels had been decreasing and we anticipated termination of the consent order within a few years. Unfortunately, the monitoring data has shown increasing levels of contaminants in surface water since about 2009.

The increasing contaminant levels in Rock Creek are likely due, at least in part, to the ceased pumping of groundwater from the upgradient Chemplex site in September of 2008 and the ceased pumping of the Spring Well and Recovery Trench at the PCS Nitrogen site in August of 2009. Based on a DNR assessment in 2006, ceased pumping of the Spring Well and Recovery Trench is unlikely to account for a major portion of the recent increases in contaminant levels in Rock Creek. This leaves the ceased pumping of the Chemplex remedial wells as the likely primary cause for increases in contaminant levels in Rock Creek since 2009. (All or part of the water pumped by Chemplex was water that would have eventually discharged naturally to Rock Creek. Thus, the natural discharge of groundwater containing the PCS contaminants was decreased by the Chemplex remedial pumping.)

Fortunately, the wetland on Rock Creek, which was constructed in 2000, has mitigated much of the impact to Rock Creek and downstream Schricker Slough. Furthermore, there does not appear to be a correlation between nitrogen levels in Rock Creek and chlorophyll levels in Schricker Slough, as John Olson with the DNR Water Monitoring and Assessment Section described at our recent (December 18<sup>th</sup>) meeting.

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Article V, Item 6 of the consent order allows the DNR to require pumping to intercept groundwater and thus reduce the amount of PCS contaminants entering Rock Creek. With the apparent lack of correlation between nitrogen in Rock Creek and chlorophyll in Schricker Slough and absent reports of fish kills in Rock Creek, a reduction in the nitrogen load in Rock Creek by additional groundwater interception by PCS would likely yield no significant benefit.

The DNR conducts regular monitoring of Rock Creek upstream of the PCS site and downstream of the Rock Creek wetland as part of the USGS Long-Term Resource Monitoring Program (LTRMP). As long as the LTRMP monitoring continues, the effect of the PCS site on Rock Creek will be monitored.

For reasons described above, the DNR suspends all requirements for surface-water monitoring of Rock Creek under Article V, Item 2 of the consent order until further notice. The DNR reserves the right to re-institute surface-water monitoring provisions of the consent order at such time as the LTRMP monitoring is ceased or the need for monitoring becomes apparent for other reasons; for example, the occurrence of a fish kill on Rock Creek.

Since 2009 groundwater monitoring under Article V, Item 2 of the consent order has been conducted at the following monitoring wells: MW-7, MW-14, MW-20, MW-23, MW-24, MW-200B, MW-200C, MW-200D, MW-205B, MW-205C, MW-207B, MW-207C, MW-208B, MW-208C, MW-209BC and MW-210BC. Monitoring of these wells may be reduced to a 5-year frequency. The DNR reserves the right to increase groundwater monitoring frequency up to as high as annually, if just cause for doing so becomes apparent.

All wells on the PCS site that are not listed above, except for RW-1B, RW-1C and wells associated with activities at the Chemplex site, may be abandoned. Test wells RW-1B and RW-1C should be maintained for potential future use for groundwater interception per Article V, Item 6 of the consent order. (This use is not likely due to complications associated with the neighboring Chemplex Site, but may be an effective means of keeping PCS contaminants out of Rock Creek.) Requirements for well abandonment are shown on the following DNR web site:

<http://www.iowadnr.gov/InsideDNR/RegulatoryWater/PrivateWellProgram/WellPlugging.aspx>. DNR Form 542-1226 documenting well abandonment should be sent to Cal Lundberg with the DNR Contaminated Sites Section.

If you have a need to abandon any of the wells listed above, please contact the DNR project manager for approval. It may be possible to substitute another well that is not listed. If possible, please make such request prior to abandoning wells that are not otherwise listed above.

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Other than groundwater monitoring every 5 years, the only other action that the DNR requires for compliance with the consent order is maintenance of the constructed wetland on Rock Creek per Article V, Item 3 of the consent order. As we discussed at our meeting on 12/18/13, your plans to work with Curt Kemmerer of the DNR Wildlife Bureau out of Maquoketa on maintaining and possibly even expanding the wetlands will satisfy Article V, Item 3 of the consent order. Continued coordination with the DNR Wildlife Bureau will satisfy this provision until such time that the consent order is terminated.

It's been a pleasure working with you on PCS Site. The constructed wetland has been a particularly successful endeavor. As you know, Cal Lundberg will now be acting as the DNR Contaminated Sites project manager for oversight of the consent order. Cal's phone number is (515) 281-7040 and his email address is [Cal.Lundberg@dnr.iowa.gov](mailto:Cal.Lundberg@dnr.iowa.gov).

Sincerely,



Bob Drustrup  
Contaminated Sites Section  
(515) 281-8900

cc: Cal Lundberg, DNR Contaminated Sites Section  
Curt Kemmerer, DNR Wildlife Bureau  
Dave Bierman, DNR Bellevue Fisheries Management Office  
John Olson, DNR Watershed Monitoring and Assessment Section  
DNR Field Office No. 6  
Michael Brom, PCS Administration (USA), Inc.