

Feb. 24, 2011

Region 5- USFWS Remarks on DRBC's Draft Natural Gas Development Regulations for public comment

Section 7.1 (e) The Commission concludes that management of natural gas development projects should promote use and development of the Basin's water resources in a sustainable manner and should be conducted pursuant to rules and regulations that avoid pollution of or injury to the water resources of the Basin.

We suggest that avoiding pollution of or injury to the water resources of the basin will be more successful if the DRBC is knowledgeable of all substances which will be used in the drilling and fracturing process. As such, we recommend that approval for water withdrawal or disposal permits related to development of natural gas or oil wells in the basin be conditional upon full disclosure to DRBC of all compounds, chemicals, and additives used or intended to be used in the drilling and fracturing process. This would include substances which are introduced into the well bore or come into contact with any equipment which enters the well bore including but not limited to: lubricants, surfactants, and substances used in fracturing or otherwise causing a geologic formation to release natural gas, oil, or related products. The recent discovery that some drillers have introduced large quantities of diesel fuel into wells being developed highlights the need for scrutiny in this regard.

See: http://holt.house.gov/index.php?option=com_content&task=view&id=747&Itemid=18

These types of substances are persistent in the environment and are considered pollutants which can adversely effect fish and other aquatic organisms should they be introduced into a surface water source either directly or via groundwater movement.

Section 7.2 Definitions.

Water body, 3) wetlands and Wetlands

These definitions should specifically include vernal pools as they are frequently not identified when wetland delineation is conducting during dry periods.

Section 7.3 Administration

(a) Types of Natural Gas Development Projects

At a minimum, compressor stations should be included under types of development projects within the Special Protection Waters area. The footprint and disturbance are similar in size to that of well pads. Chemicals are present on the compressor site that could cause water quality degradation in groundwater and surface water if released. Air emissions could result in localized degradation of air quality that could affect vegetation health and deposition of particle-bound contamination in surface waters.

(m)(2) Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the project sponsor's project withdrawal, must be repaired, replaced or otherwise mitigated at the expense of the project sponsor.

As written, this section appears to limit these responsibilities to projects involving water withdrawal. Water quality degradation is likely from releases to surface water or ground water during other, non-withdrawal aspects of hydrofracturing. This responsibility clause should be broadened to include degradation resulting from any activity associated with gas drilling, transport, water withdrawal, or wastewater treatment.

Section 7.4 Water Sources for Uses Related to Natural Gas Well Development

(e)(2) (ii) Natural diversity inventory assessment. In addition to reserving the right to prepare a separate NDIA at the expense of the project sponsor, the Commission should reserve the right to request an updated NDIA. Additional NDIA's are necessary for projects that extend over long periods of time (e.g., lifespan of a well) as the distribution of populations of threatened and endangered species can change or new surveys can document their presence in areas thought to be unoccupied.

(e)(3) Additional submittals and conditions applicable to new surface water withdrawals approved by ABR, docket, or protected area permit. An additional condition should be required here to ensure that the taking of macro-invertebrates and all life stages of fish (eggs, larvae, juvenile, adult) due to withdrawal of water via suction pumping is minimized through the use of wedgewire screen surrounding the intake orifice or use of other methods found in peer-reviewed publications which have been demonstrated effective in excluding aquatic life from intake suction lines. In addition, no water withdrawals should be permitted in tributaries or areas of the mainstem Delaware known to support the federally-endangered dwarf wedgemussel.

Section 7.5 Well pads for Natural Gas Activities

At a minimum, compressor stations should be included under types of development projects within the Special Protection Waters area. The footprint and disturbance are similar in size to that of well pads. Chemicals are present on the compressor site that could cause water quality degradation in groundwater and surface water if released. Air emissions could result in localized degradation of air quality that could affect vegetation health and deposition of particle-bound contamination in surface waters.

(h) (1) (v) Non-point source pollution control plan. In Special Protection Waters, the Commission should consider additional provisions to prevent leaching of contaminants into groundwater from drilling mud and boring waste. Contaminants in these materials, that are normally bound or insoluble, can become mobilizing by altered oxygen exposure and acidic precipitation when stored in piles on site. While standard stormwater control practices will prevent contaminated soil migration, they may not prevent leaching of naturally-occurring contaminants such as arsenic into groundwater. All boring waste should be contained in lined storage areas, particularly in the Special Protection Waters zones.

(h)(2)(i) (A) Pre-alteration Report. The requirement for benthic invertebrate surveys should be expanded to include mussel surveys in areas with known habitat for dwarf wedgemussels.

(h)(2)(i) (B) Post Construction Report. Many of the potential contaminants will not persist in groundwater and surface water. Their toxic effects on biota may persist, but the contaminants themselves will degrade or migrate. Thus, the annual monitoring requirement is insufficient to capture these potential releases. In Special Protection Waters and potential dwarf wedgemussel habitat, the Service recommends in-stream conductivity probes that measure and record conductivity on a pre-set interval and can be downloaded on a monthly basis. Biological monitoring should be performed if any increases in conductivity are recorded.

(h)(2) (iii) Drilling Fluids and Drill Cuttings from Horizontal Wellbores in the target formation. All cuttings and liquids stored on site for up to 45 days from the completion of well drilling should be contained in lined storage areas, particularly in the Special Protection Waters zones.

Section 7.6 Wastewater Generated by Natural Gas Development

(e) Basin-wide effluent limitations and stream quality objectives. The Commission should reserve the right to require specific toxicity tests on the effluent from treatment facilities, including bioassays with benthic invertebrates, mussels, and fish. These tests may be necessary in Special Protection Waters and potential dwarf wedgemussel habitat.

Additional concern: A Feb 26, 2011 New York Times article showed strong evidence for higher levels of radioactivity in fracking waste water than previously thought. Traditional wastewater treatment plants are unable to remove this radioactivity and if discharged into waters of the Delaware Basin, the radioactivity would be persistent and could bio-accumulate in the food chain. As such this would represent a threat to many aquatic and terrestrial wildlife species managed in cooperation with all of our other Federal and State partners in the Delaware Basin. In addition, before wastewater treatment plants accept leachate from landfills which have received drill cuttings from natural gas wells, the leachate should be evaluated for its radioactivity level to determine its safety for discharge since typical treatment plants can not remove radioactivity in their treatment process.