



April 14, 2011

Commission Secretary
DRBC, P.O. Box 7360
25 State Police Drive
West Trenton, NJ 08628

Re: Comments on Draft Natural Gas Regulations

Dear Commission Members:

I appreciate this opportunity to submit the following comments on the DRAFT Natural Gas Regulations. My name is Thomas J. Reilly, Jr., P.E. I am a registered professional engineer in the Commonwealth of Pennsylvania and the State of New York and President of Reilly Associates Engineering. I have over twenty-five years of experience working on projects throughout the upper Delaware River Basin many of which have involved the Delaware River Basin Commission. I am particularly familiar with the application of the New York and Pennsylvania stormwater management, water supply and wastewater management regulations to real projects working in concert with DRBC regulations. These projects have had footprints both similar to and much larger than Marcellus shale operations.

The conservation of water resources is vital to the health of the natural environment, the human population and the economy. Providing abundant sources of domestic energy using methods that do not harm the environment is critical to the security and prosperity of the United States and its citizens. There are costs and environmental risks associated with delivering oil by supertanker from the Middle East, drilling from platforms in the ocean, mining coal with massive drag lines and running electrical turbines with nuclear heated steam.

The DRBC is charged with protecting the water resources of the basin. Also by the compact the signatory parties are required to control future pollution from the waters.

The proposed regulation recognizes project compliance with state laws and permit requirements relating to natural gas and exploratory well construction and operation shall constitute satisfaction of the project sponsor's obligations under section 3.8 of the Compact that relate to regulation of gas well construction and operation, except as specified in Section 7.5. The excepted area of state jurisdiction refers to Well Pads for Natural Gas activities. This section represents a new venture for the DRBC into Land Use regulations superseding state and local regulations to a degree not imposed on any other industry by the DRBC and beyond the bounds of the Compact into regulation of land use for a specific industry.



Section 7.5 Well Pad for Natural Gas Development should be substantially revised to delete the siting requirements including the requirements for Natural Gas Development Plans and Well Pad Dockets and Well Pad ABR for several reasons.

- The DRBC does not currently regulate any other industry from a land planning and stormwater management perspective. Many development types create impervious surfaces and impact forested areas much more extensively than gas pad development both individually and cumulatively. Many commercial uses throughout the river basin expose the waters to risks without DRBC siting restrictions and pad docket. The draft regulations refer to gas "pads" as if the grading of a pad is something unique to gas wells. Pads are safely graded for many development purposes throughout the river basin on a daily basis without any control of the location or design by the DRBC. Gas stations, power plants, chemical plants and refineries are just a few examples. Major and minor highways on which a wide range of chemicals are transported cross over and border the river and its tributaries much closer than any anticipated well development. It is not logical from a standpoint of relative impacts and risks for the DRBC to specifically target gas drilling for pad regulation.
- Each state and locality has the right and obligation to control pollution and regulate land use in its boundaries. The DRBC pad regulations are micro management of land usage within the states that is well beyond the bounds anticipated by its compact. It is expertise that the DRBC does not have, would have to develop and is duplicative of existing agencies and results in unnecessary growth of government.
- Pennsylvania has its own requirements for pad development which include setbacks to wetlands and waters of 100 ft. for temporary pads and 150 ft. for permanent pads. Within those setbacks the design must meet requirements for management of temporary and permanent sedimentation and erosion and stormwater. Any increases in stormwater rate, volume or quality must be mitigated with application of best management practices. Professional inspections are required of the implementation and maintenance. Threatened and Endangered Species and Cultural Resources are required to be studied and cleared by the state permitting requirements. Pennsylvania has been substantially increasing inspection staff. DRBC is proposing creation of a parallel pad review and inspection apparatus which would require a completely new set of administrators, reviewers and inspectors. If DRBC is not satisfied with the extent of Pennsylvania's inspections it would make sense to discuss the situation and make necessary adjustments instead of creating a whole new DRBC gas agency from scratch. It is fiscally imprudent to create duplicate government administration.
- We tested the pad restrictions and setbacks listed in sections 7.5 B. 3. & 4 on large tracts of land in the upper Delaware basin where we have detailed topographic and wetland data. These tracts are typical of the lands in the portion of the basin where drilling is expected. The glaciated terrain has many small pockets of wetlands fed by small



perennial and intermittent streams. There are many rolling hills with rounded tops and rock outcrops. Many areas were previously used for dairy farming and grazing with some still in production. Many of the farms have dug ponds. Many formerly cultivated fields have returned to woodland. Most of the hilltops were never cultivated due to the very shallow soils and are still wooded. The existing roads pass through the narrow valleys and alongside streams where there are the flattest grades. A plan of a typical 1,000 acre tract is attached showing that only two small areas of 7 and 18 acres out of 1,000 or 2.5% are allowed to be used with the restrictions and setbacks. These locations are on wooded hilltops far from existing roads. One small farm pond can make a large flat open area near a public road unavailable due to these setbacks. That one-half acre pond is proposed to have the same setbacks as a water supply reservoir or the Delaware River. The un-intended consequence is that development is forced onto ridge tops with substantially greater disturbance of wooded areas and substantially greater earth disturbance due to the lengthy access roads. Both the economics of minimizing pad, gathering line and access road cost and the existing state regulations would typically result in much less woodland and earth disturbance than these restrictions.

Section 7.5 (c) Natural Gas Drilling Plans (NGDP). The requirement is for a master plan of all well pads and associated infrastructure for entire leaseholds. Five wells may be applied for while the NGDP is pending. Master Planning is a necessary part of any wise approach to minimizing impacts and maximizing cost efficiency. However requiring a complete leasehold master plan for approval at the very early stage of exploration of 1 to 5 wells is an expensive and fruitless paper exercise that is a time consuming waste of both drilling company and regulatory resources. Any early planning depicted on the NGDP will be substantially altered by the geologic results of the early drilling which would include significantly more than five wells in a large leased area. The regulation of the leasehold master plans has potential benefits were it to be done after substantially more exploration is done. However, that review would be more effective by the state agency that regulates stormwater impacts and stream and wetland crossings and not by the DRBC where it is outside of their charter and their expertise.

Section 7.5 (e) Approval by Rule.

The approval by rule is only applicable to sites which are not forested and under 15% slope. The slope definition does not include any criteria for measurement of that slope. Would a small isolated area of steep slope disqualify a large adjoining area? Our detailed analysis of actual site conditions including the forest cover, wetland and pond setbacks and slopes revealed that no areas would be eligible for the Approval by Rule. The area analyzed is typical of the expected drilling areas and suggests that the ABR criteria would not be applicable anywhere and should be deleted or revised..

Water planning and reporting, groundwater monitoring and Wastewater treatment and disposal plans included in section 7.4, 7.5 and 7.6 are generally consistent with the Commission's mission and provide for adequate planning, oversight and accounting for water usage and wastewater disposal.



We recommend that use of treated effluent from currently permitting treatment plants serving the public be promoted through a reduced consumption fee. We further recommend that the consumption fees be earmarked for funding of treatment upgrades to address existing issues in the upper Delaware.

Section 7.3 (k) Includes the addition of site bonding and inspection requirements that overlaps with the state's own bonding and inspection. The bonding requirements now in place at the state should be examined to determine if it is adequate for restoration and mitigation should the applicant fail to perform. However, having two overlapping entities performing redundant inspections is an inefficient use of resources. More fees may be needed to increase inspections and increased bond amounts may be needed to adequately cover potential problems, however, the DRBC and the states should work together to address the issues at the state level.

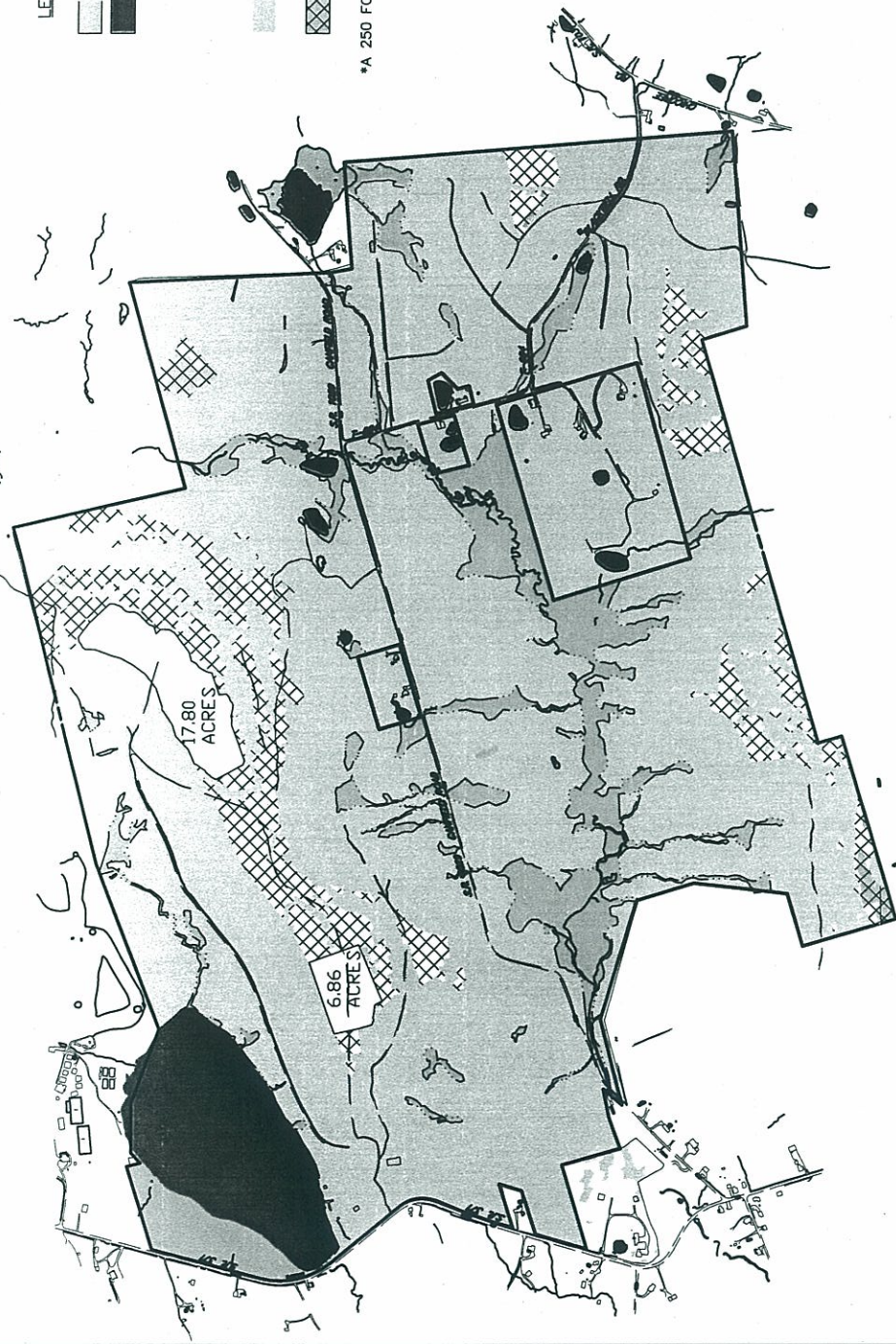
The DRBC has a critical role in the regulation of water supply and wastewater for the Marcellus Drilling. The DRBC's regulation should not extend to land use regulation and usurping the State's role for pad permitting and inspection.

Very truly yours,

REILLY ASSOCIATES

Thomas J. Reilly, Jr., P.E.
President

TJR/tr
Attachment



LEGEND

- WETLANDS
- WATER BODY
- NON-PERMISSIBLE AREA
DUE TO:
SETBACK BUFFERS
20% OR GREATER SLOPES
FORESTED AREAS
- PERMISSIBLE AREA
DOCKET NOT REQUIRED / DOCKET REQUIRED
- PERMISSIBLE AREA THAT CAN NOT SUPPORT A
200,000 SF (4.6 AC) WELL PAD*

*A 250 FOOT MINIMUM WIDTH WAS USED IN SIZING THE WELL PAD.



DRBC DRAFT
GAS WELL PAD SITE
SETBACK, SLOPE AND FOREST REQUIREMENTS

TYPICAL 1000 ACRE LOT
WAYNE COUNTY, PA

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