

RULE 317B – Protection of Drinking Water Supply Sources

Comprehensive Rulemaking of 2008: Navigating the
New Oil and Gas Regulatory Landscape

David Brown, Manager – Regulatory Affairs – HSE, BP
America

Jennifer Biever – Attorney – Hogan & Hartson L.L.P.

General Applicability

- Applies to Drilling Completion Production and Storage (DCPS) Operations
 - Excludes roads, gathering lines, pipelines and routine operations and maintenance
- Within Surface Water Supply Areas
- Applicability determined by reviewing:
 - Public Water System Surface Water Supply Area Map (Appendix VI)
 - Entering information into Public Water System Surface Water Supply Area Applicability Determination Tool (Commission website)
- Public Water Systems listed in Appendix VI
 - Rulemaking required to amend Appendix VI
 - Rulemaking planned April 28, 2009

Buffer Zones

- Measured from ordinary high water line of each bank to the near edge of the disturbed area at the oil and gas location where DCPS Operations will occur
- Apply only to DCPS Operations located on surface (not to subsurface boreholes and equipment or materials contained therein)
- Do not apply to DCPS Operations in area that does not drain to a classified water supply segment protected by this Rule 317B

Internal Buffer Zone (New Oil and Gas Locations)

- DCPS Operations and Non-Exempt Linear Features at New Oil and Gas Locations
 - Non-Exempt Linear Feature – road, gathering line, or pipeline that is not necessary to cross a stream or connect or access a well or a gathering line
 - Feature is not considered necessary simply because it is the most proximate and least expensive method for gaining access or moving material through a pipeline
- Within Surface Water Supply Areas
- May Not Occur in Whole or in Part in
- Internal Buffer Zone (0-300 feet)
- Without a Variance

Internal Buffer Zone Variance

- Variance requires
 - Approval under Rule 502.b;
 - Consultation with CDPHE under Rule 306.d; AND
 - Approval of Form 2A or 2 with COAs OR Director approved CDP covering operation
- COGCC shall grant variance if
 - Proposed activity “results in substantially equivalent protection of drinking water quality” AND either
 - Conducting activity outside Internal Buffer Zone poses greater risk to public health, safety or welfare OR
 - Conducting activity outside Internal Buffer Zone is technically infeasible and prevents operator from exercising mineral rights
- If variance granted, COAs shall include requirements for intermediate buffer zone

Intermediate Buffer Zone (New Oil and Gas Locations)

- DCPS Operations at New Oil and Gas Locations
- Within Surface Water Supply Area
- In Intermediate Buffer Zone (301-500 feet)
- Requires
 - Pitless drilling systems;
 - Flowback and stimulation fluids in tanks on well pad or with downgradient perimeter berming;
 - Berms/containment devices constructed around crude oil, condensate and produced water storage tanks;
 - Collection of baseline surface water data;
 - Notification of potentially impacted Public Water Systems 15 miles downstream; and
 - Emergency spill and response program

External Buffer Zone (New Oil and Gas Locations)

- DCPS Operations at New Oil and Gas Locations
- Within Surface Water Supply Area
- In External Buffer Zone (501-2640 feet)
- Requires
 - Pitless drilling systems or containment of all drilling flowback and stimulation fluids pursuant to Rule 904;
 - Collection of baseline surface water data;
 - Notification of potentially impacted Public Water Systems 15 miles downstream; and
 - Emergency spill and response program

Existing Oil and Gas Locations (No New Surface Disturbance)

- Existing Oil and Gas Locations
- Within Surface Water Supply Area
- Within Internal, Intermediate or External Buffer Zones
- With No New Surface Disturbance after effective date
 - New Surface Disturbance is surface disturbance that expands the area of surface covered by an oil and gas location beyond that initially disturbed in the construction of the oil and gas location
- Requires
 - Collection of baseline surface water data;
 - Emergency spill and response program; and
 - Implementation and maintenance of BMPs as necessary

Existing Oil and Gas Locations (With New Surface Disturbance)

- Existing Oil and Gas Locations
- With New Surface Disturbance
 - Addressed in accepted CDP or
 - Where new disturbance will not increase existing disturbed area prior to interim reclamation by more than 100 percent up to a maximum of 3 acres and new surface disturbance in a direction away from stream or no closer to stream if moving away from stream would be more damaging
- After effective date
- Require as follows
 - For All Zones:
 - Collection of baseline surface water data;
 - Emergency spill and response program; and
 - Implementation and maintenance of BMPs as necessary

Existing Oil and Gas Locations (With New Surface Disturbance)

- For External and Intermediate Zones
 - Pitless drilling systems or containment of drilling, flowback and stimulation fluids with impervious liners as provided in Rule 904
- For Internal Zone
 - Pitless drilling systems;
 - Flowback and stimulation fluids contained within tanks on well pad or with downgradient perimeter berming;
 - Berms/containment devices for all crude oil, condensate and produced water tanks; and
 - Notification of potentially impact Public Water Systems within 15 miles downstream

Interim Policy

Prior to Effective Date

- Prior to filing APD
- Review drinking water protection area map
- Include certification of compliance with APD application indicating whether well in area covered by map
- If covered by map CDPHE reviews APD and recommends any COAs
- Operator can respond to recommended COAs
- Director considers recommendations/responses in approving APD
- If Director imposes COAs operator may request hearing

Implementation Strategy - Mapping

- Recommend Mapping To Identify Existing and Future Wells Within The Various Buffers
 - The COGCC website has maps of the 317B water intakes mapped along with the 5 mile radius, applicable stream channels and the buffers as part of the Interim Rule (i.e., Determination Tool in the regulations)
 - Monitor the COGCC website for notices of map revisions
 - You can use the COGCC maps or develop your own by obtaining layers from the CDPHE
 - This approach will require monitoring the COGCC website for notices of map changes
 - If location of existing or future activities straddle a mapped buffer line, consideration should be given to actually surveying the site from the stream channel to verify the buffer category

Implementation Strategy- Communicate the Terminology

- All personnel, including contractors and consultants, involved in siting new wells or linear feature or conducting operations for existing facilities within the buffer areas, must understand the terminology.
 - DCPS
 - Existing Oil and Gas Location
 - New Oil and Gas Location
 - New Surface Disturbance
 - Non-Exempt Linear Feature
 - Review Statement of Basis and Purpose

Implementation Strategy- Understanding Variances

- Variance criteria exists to allow operations in the Internal Buffer Zone:
 - Standard to be met for variances is very high and will require an evaluation of prior requests and determination
 - If a variance is sought, here are some items to consider for inclusion:
 - Evaluate operating practices (such as SPCC and stormwater);
 - Visually demonstrate using photographs, cross sections, topographical maps, etc. to indicate risks of moving upland
 - Demonstrating technical infeasibility of moving out of the internal buffer zone with technical evaluation regarding complications such as extent of directional drilling, landowner preferences, etc.

Implementation Strategy- Water Sampling

- Water sampling required for Intermediate and External Buffer Zones and any variances granted for the Internal Buffer Zone
- Need to ensure that at new locations both an initial sample and a post activity sample is collected (3 months after completion of regulated activity) and collected at existing locations (by six months after effective date)
 - May want to consider using a consultant to
 - Maintain consistency in the location and with standard protocols and;
 - Ensure the mailing of the results to the COGCC and applicable Public Water Supplier and;
 - Deliver the results in an electronic data deliverable format; and
 - Determine GPS locations for sample points for future consistency

Notification Requirements To The Public Water Suppliers

- Someone must be designated to notify public water suppliers within 15 stream miles in the following instances:
 - Prior to commencement of “new surface disturbance” for a DCPS operation;
 - Following discovery of a spill or release that threatens to impact a public water supply system
- Must include in a emergency response program current contact information for downstream Public Water Supply System within 15 stream miles of the DCPS operation
 - With a field-wide spill response plan, you may decide to list in the document which wells are within 15 miles of a downstream public water supply intake(s) in the event a spill or release that must be reported

Implementation Strategy- Existing Oil and Gas Locations

- Utilizing Existing Oil and Gas Locations with new surface disturbance have provisions that can occur provided the new disturbance is 100% of the original pad prior to interim reclamation up to a maximum of 3 acres
 - It is important to determine the original dimensions of your pad. This can be done with the original site surveys, a site inspection or with aerial photography