



August 8, 2012

Mr. Derek Smithy
Water Quality Programs Division Chief
Oklahoma Water Resources Board
3800 North Classen Boulevard
Oklahoma City, Oklahoma 73118

RE: Shallow Groundwater Restriction Request under Title 785, Chapter 45, Appendix H
Putnam-Oswego Former Gas Plant
Section 35-T16N-R16W
Dewey County, Oklahoma

Dear Mr. Smithy:

On behalf of ExxonMobil Environmental Services (ExxonMobil), Groundwater & Environmental Services, Inc. (GES) formally requests that shallow groundwater at the above referenced site be listed in Appendix H of Title 785, Chapter 45 of the Oklahoma Administrative Code, which pertains to Oklahoma Water Quality Standards. The site has been closed by the Oklahoma Corporation Commission after extensive monitoring and remediation. This request is to prohibit future shallow groundwater use within the site vicinity due to residual petroleum impacts in groundwater at the site.

The Appendix H listing would be placed on shallow groundwater (0 to 50 feet below ground surface) in the northwestern corner (NWNWNW 1/4) of Section 35, Township 16N, Range 16N and the northeastern corner (NENENE 1/4) of Section 34, Township 16N, Range 16N. The site is described as the Putnam-Oswego Former Gas Plant near the intersection of N2310 County Road and E0820 County Road. Please find attached the listing for Appendix H. Also, please find attached a site map depicting the boundary of the area for which groundwater use is to be restricted.

The below information presents the required justification pursuant to Title 785, Chapter 45 in the Oklahoma Administrative Code and the Oklahoma Administrative Procedures Act O.S. 75, Section 303.

In order to have groundwater listed in Appendix H, justification must be presented per Title 75, Chapter 45-7-3(b)(2)(E), which states:

A beneficial use designation for groundwater may be amended or removed only after a demonstration to the satisfaction of the Board that meets one of the following tests:

- (i) The designated use does not exist due to a condition that was not caused by humans, and treatment using Best Available Technology will not achieve the designated use, or
- (ii) The designated use does not exist due to a condition that is attributable to irreversible impacts caused by humans, and the remedy would cause substantial and widespread economic and social impact.

Shallow groundwater in the vicinity of the Putnam-Oswego Former Gas Plant warrant inclusion in Appendix H for the following reasons:



- 1) The sources of the petroleum release (as well as all other petroleum sources) have been removed from the site. In addition, extensive remediation (free product removal from 1999 to 2009) has been conducted at the site and all but de minimis free product has been removed from the groundwater table. The free product has been removed to the maximum extent practicable at the site.
- 2) The remaining man-made impacts (de minimis free product and dissolved petroleum in the groundwater) are considered technically infeasible to remediate (similar to 40 CFR 131.10(g) (3) or OAC 785:45-5-2 (b) (2)(C) for irreducible man-induced impacts), using available technologies (skimming, pump and treat, etc.), in a time frame significantly different than natural attenuation (which can take several decades).
- 3) The site is fully delineated, natural degradation of petroleum constituents is occurring indicating the plume will continue to shrink over time and no sensitive receptors are within 1,000 feet of the site.
- 4) The shallow groundwater should not be used during this unknown remaining natural remediation period, which is why the Appendix H listing is necessary.

Since revisions to Appendix H are governed by the Oklahoma **Administrative Procedures Act O.S. 75 Section 303**, information is being provided to answer the following questions required by the APA for the Notice of Rulemaking Intent (NORI) (Section 303(B)(1-5) and APA Rule Impact Statement (RIS) (Section 303(D)(2)(a-j)).

Section 303(B) (1-5):

1. In simple language, a brief summary of the rule: Beneficial use designation of site groundwater in Appendix H of Title 785, Chapter 45 of the Oklahoma Administrative Code.

2. The proposed action being taken: Include shallow groundwater at the site in Appendix H of Title 785, Chapter 45 of the Oklahoma Administrative Code.

3. The circumstances which created the need for the rule: A petroleum release occurred at this old site some unknown time prior to 1999, when the problem was discovered, which resulted in extensive remediation (free product removal from 1999 to 2009) at the site. The remediation was successful in recovering most of the free product and only de minimis free product remains at the site. The free product has been removed to the maximum extent practicable. The remaining man-made impacts are considered technically infeasible to remediate (similar to 40 CFR 131.10(g) (3) or OAC 785:45-5-2 (b) (2) (C) for irreducible man-induced impacts), using available technologies (skimming, pump and treat, etc.), in a time frame significantly different than natural attenuation (which can take several decades).

4. The specific legal authority authorizing the proposed rule: Oklahoma Water Resources Board.

5. The intended effect of the rule: Prevent people from using potentially impacted groundwater by not allowing water wells in the shallow (0 – 50 feet) aquifer or by screening off the shallow aquifer zone for any wells drilled at the site.



Section 303(D) (2)(a-j):

a. a brief description of the purpose of the proposed rule: Prevent people from using potentially petroleum-impacted groundwater by not allowing water wells in the shallow (0 – 50 feet) aquifer or by screening off the shallow aquifer zone for any deep wells drilled at the site.

b. a description of the classes of persons who most likely will be affected by the proposed rule, including classes that will bear the costs of the proposed rule, and any information on cost impacts received by the agency from any private or public entities: People will be protected. Groundwater is not currently used in the area, so no adverse health or economic effect is anticipated.

c. a description of the classes of persons who will benefit from the proposed rule: All persons and livestock that might otherwise be exposed to shallow groundwater at the site.

d. a description of the probable economic impact of the proposed rule upon affected classes of persons or political subdivisions, including a listing of all fee changes and, whenever possible, a separate justification for each fee change: There is no anticipated economic impact to implement this proposed rule.

e. the probable costs and benefits to the agency and to any other agency of the implementation and enforcement of the proposed rule, the source of revenue to be used for implementation and enforcement of the proposed rule, and any anticipated effect on state revenues, including a projected net loss or gain in such revenues if it can be projected by the agency: None.

f. a determination of whether implementation of the proposed rule will have an economic impact on any political subdivisions or require their cooperation in implementing or enforcing the rule: None.

g. a determination of whether implementation of the proposed rule may have an adverse economic effect on small business as provided by the Oklahoma Small Business Regulatory Flexibility Act: None.

h. an explanation of the measures the agency has taken to minimize compliance costs and a determination of whether there are less costly or nonregulatory methods or less intrusive methods for achieving the purpose of the proposed rule: Not Applicable.

i. a determination of the effect of the proposed rule on the public health, safety and environment and, if the proposed rule is designed to reduce significant risks to the public health, safety and environment, an explanation of the nature of the risk and to what extent the proposed rule will reduce the risk: Prevent people from using potentially impacted groundwater by not allowing water wells installed in the shallow (0 – 50 feet) aquifer zone. Water wells that are installed at a depth greater than 50 feet below grade must case off the shallow aquifer to ensure the public is not exposed to the shallow groundwater at the site.



j. a determination of any detrimental effect on the public health, safety and environment if the proposed rule is not implemented: The rule will protect the public from being exposed to potentially petroleum-impacted groundwater within the shallow aquifer at the site.

Please feel free to contact the undersigned at (888) 540-0804 or at rcarroll@gesonline.com with any questions or concerns.

Sincerely,

GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

A handwritten signature in black ink, appearing to read 'Ryan F. Carroll'.

Ryan F. Carroll
Project Manager

A handwritten signature in black ink, appearing to read 'James Hodges'.

James Hodges
Senior Project Manager

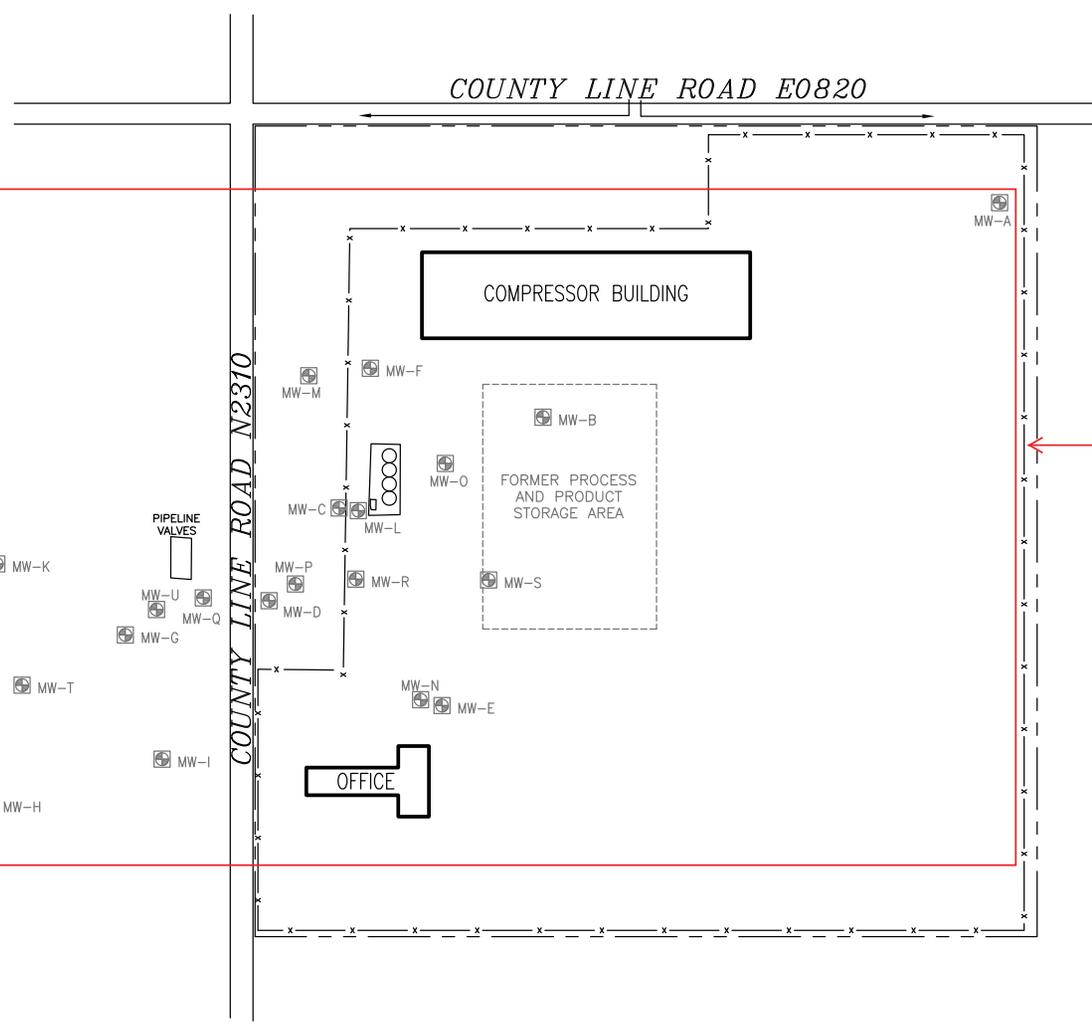
Attachments:

Appendix H Listing
Site Map Depicting Area of Shallow Groundwater Restriction

Cc: Patricia Billingsley, Oklahoma Corporation Commission
Jewel Cox, ExxonMobil Environmental Services

Appendix H Listing

Groundwater formation name (site name)	Location	Address	Depth Zone (upper-lower limit)	Class (1-4)	Water Supply	Ag	M&I	Agency	Remarks
Rush Springs Aquifer (Putnam-Oswego Former Gas Plant)	NWNWNW 1/4 of Section 35, T16N-R16W & NENENE 1/4 of Section 34, T16N-R16N	SE and SW corners of intersection of County Road N2310 and County Road E0820 in Putnam, Dewey County, Oklahoma	0-50 feet bgs	2	●	●	●	Corp Comm	Petroleum hydrocarbons impacting shallow aquifer. Case off from zero to fifty (0-50) feet below ground surface, completing any water well below this zone.



- LEGEND**
- PROPERTY BOUNDARY
 - x- FENCE
 - ⊗ PLUGGED/ABANDONED WELL

Shallow
Groundwater
Restriction Area
Boundary

DRAFTED BY: W.G.S. (N.J.)	SITE MAP		
CHECKED BY:	PUTNAM-OSWEGO COMPRESSOR STATION PUTNAM, OKLAHOMA		
REVIEWED BY:	Groundwater & Environmental Services, Inc. 13003 SW FREEWAY, SUITE 190, STAFFORD, TEXAS 77477		
NORTH 	SCALE IN FEET 0 APPROXIMATE 150	DATE 11-21-11	FIGURE