Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)			
Person(s) Conducting Field Inspection	Ashlee Lane	12/03/12	
Site Information			
Location:	PA 14-6	Time: 1300	
Type of Facility:	Existing Well Pad		
Environmental Conditions	Clear and calm; soil conditions dry.		
Temperature (°F)	50°s		

Has the proposed, new or existing location been designated as a sensitive area?
☐ Yes ☒ No

SURFACE WATER

1. Are there any surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new or existing facility?
   ☒ Yes ☐ No

   If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands: There is one (1) USGS identified intermittent drainage, Allen Water Creek.

   If yes, describe location relative to facility: Allen Water Creek is located approximately 854 feet north of the well pad. Note: There is also a USGS identified intermittent drainage identified on the USGS topo map which was field verified to no longer exist due to land modifications in the immediate vicinity of the existing facility.

2. Could a potential release from the facility reach surface water features?
   ☐ Yes ☒ No

   If yes, describe the pathway a release from the facility would likely follow to determine if the potential to impact surface water is high or low.

3. Is the potential to impact surface water from a facility release high or low?
   ☐ High ☒ Low

WPXENERGY

GROUNDWATER

1. Will the proposed/new or existing facility have any pits which will contain hydrocarbons and chlorides or other E&P wastes?
   ☐ Yes ☒ No Cuttings will be managed on the surface
   If yes, List the pit type(s):

2. Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?
   ☒ Yes ☐ No

3. Is the hydraulic conductivity of the underlying soil or geologic material $\leq 1.0x10^{-7}$ cm/sec?
   ☐ Yes ☒ No

4. Is the proposed facility located within 1/8 mile of a domestic water well or 1/4 mile of a public water supply well which would use the same aquifer?
   ☐ Yes ☒ No

5. Is the proposed facility located within a 100 year floodplain?
   ☐ Yes (*Sensitive Area*) ☒ No (*If no, proceed to question #6.*)

6. Is the depth to groundwater known?
   ☐ Yes (*If yes, follow instructions provided in 6(a) of this section).*
   ☐ No (*If no, follow instructions provided in 6(b) of this section*).

   (a) If yes, could a potential release from the proposed facility reach groundwater?
   ☐ Yes ☐ No
   If yes, explain:

   (b) If no:
   (i) Evaluate surrounding soils, topography, and vegetation which may suggest the presence of shallow groundwater.
   (ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineers Office.

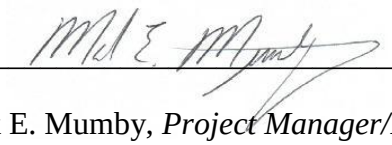
7. Is the potential to impact ground water from the facility in the event of a release high or low?
   ☐ High ☒ Low

Additional Comments:

As stated in the surface water section of this sensitive area determination, there is one USGS identified intermittent drainage (Allen Water Creek) located within ¼ mile of the existing facility. The facility, as it is currently constructed, limits the direction of a potential release to primarily the southeastern side. If a potential release were to migrate off the southeastern side of the facility, flow would tend to be to the southwest where any fluids would tend to congregate in a low lying area adjacent to the southwestern corner of the facility and the Hays Gulch access road. There is a culvert in the vicinity of the low lying area which directs flow to the south side of the frontage road. However, there is no defined channel on the south side of the frontage road and none under I-70 thus preventing flow from reaching the Colorado River. It is not anticipated a release would impact Allen Water Creek due to the topographical setting of the facility. In addition the topsoil stockpile is located on the northeastern side of the facility which forms a barrier between the facility and Allen Water Creek. Also noted in the surface water section of this sensitive area determination; there is one USGS identified intermittent drainage which is depicted as flowing through the center of the facility. However, as determined during the site visit, this drainage feature no longer exists due to man- made modifications to the land surface in the immediate vicinity of the facility. Best Management Practices (BMPs) are currently installed on the northeastern and southeastern sides of the facility. During pad reconfiguration these BMPs should be inspected and upgraded; especially the earthen perimeter berm on portions of the southwestern and southeastern sides of the facility. These should be monitored and maintained to ensure site containment in the event of a release.

The State Engineer's Office and USGS records were reviewed and no records were revealed which would provide additional information pertaining to the depth to groundwater. The topographical setting of the facility and the vegetative cover would not suggest the presence of shallow groundwater.

Based on the information collected during the site visit and desktop review, the potential to impact surface water features, actual flowing surface water, and groundwater would be deemed to be low. However, the facility is located adjacent to the external buffer zone of the Parachute/Battlement Mesa Surface Water Supply Area (317b Area). Therefore BMPs should be upgraded or added as necessary, as noted above, to ensure site containment in the event of a release. Consideration should be given in regards to blocking the culvert which runs under the frontage road during periods on no precipitation. This would further aid in preventing a potential release from migrating into the external buffer zone of the Parachute/Battlement Mesa 317b area. Any flow inhibiting device should be removable to allow for normal stormwater drainage in periods of high precipitation in order to prevent unnecessary ponding of water in the low lying area adjacent to the southwestern corner of the facility. With the potential to impact both surface water and groundwater being deemed low and implementation of adequate BMPs, the facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 1/15/2013

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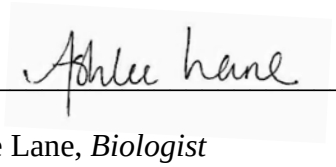 Date: 12/7/2012

Ashlee Lane, *Biologist*
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