Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)			
Person(s) Conducting Field Inspection	Finn Whiting	5/31/2013	
Site Information			
Location:	RG 24-29-298	Time: 9:50	
Type of Facility:	Proposed well pad		
Environmental Conditions	Sunny with a light breeze, dry soil conditions		
Temperature (°F)	55°		

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: One USGS identified unnamed intermittent drainage, and one unmanned (non-USGS) identified ephemeral drainage.

   If yes, describe location relative to facility: The unnamed USGS identified drainage is located 7023 feet to west southwest and the unnamed ephemeral drainage is located approximately 1,004 feet to the northeast of the proposed 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. A potential release, if it were to migrate off the facility, would flow to the northeast and southwest following the natural contours of the area.

3. Is the potential to impact surface water from a facility release high or low?
   ☒ Moderate to surface water features ☒ Low to actual flowing (perennial) surface water

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
   If yes, List the pit type(s): A cuttings trench will be located on the northwest side of pad.

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

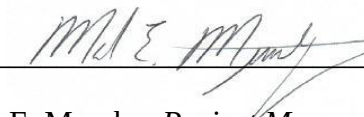
Additional Comments:

As stated in the surface water section of this sensitive area determination there is one USGS identified unnamed intermittent drainage and one non-USGS unnamed ephemeral drainage located within ¼ mile of the proposed facility. The facility, as it is currently proposed, is situated on the crest of a small ridgeline which would allow a release to potentially migrate off any of the four (4) sides. The crest of the ridgeline dissects the proposed facility at approximately the mid-point. Therefore, if a release were to migrate off the southwestern half flow would be to the southwest towards the unnamed USGS identified intermittent drainage. A potential release, if it were to migrate off the northeastern half of the proposed facility, would flow to the northeast into a relatively flat lying area but still towards the unnamed ephemeral drainage located to the northeast as stated above. During facility construction, it is recommend that Best Management Practices (BMPs) be installed on all sides if warranted. These should be in the form of an earthen perimeter berm along the graded edge of any fill slope sides. With the relatively flat topography a diversion ditch should be constructed along the toe of any fill slope sides as well. All BMPs should be monitored and maintained to ensure site containment in the event of a potential release.

The State Engineer's Office and USGS records were reviewed and no records were revealed which would provide any additional information pertaining to the depth to groundwater. The topographic setting and vegetative cover (Piñon juniper woodland and sage brush) in immediate vicinity of the proposed facility does not suggest the presence of any potential shallow groundwater.

Based on the information collected during the site visit and desktop review, the greatest potential for impacts would be to the USGS identified intermittent drainage located to the southwest of the proposed facilty. A potential release, if it were to migrate off the southwestern side of the facility, would flow down a fairly steep hillside and potentially reach the drainage feature. Although identified as intermittent, observations made during the site visit determined that the drainage exhibits ephemeral characteristics in the immediate vicinity of the proposed facility. The drainage does not exhibit an ordinary high water mark, contains xeric vegetation along the bottom, including several woody species indicating the drainage does not flow a vast majority of the time. Even with the moderate potential for impacts to this drainage, it is not anticipated a release, if it were to impact the drainage, would ever reach any live flowing surface water. This would be due to the distance a potential release would have to migrate to impact any flowing perennial surface water and the high infiltration rates of the soils within the bottom of the drainage which would prevent a potential release from migrating a great distance. The potential for impacts to the unnamed ephemeral drainage located to the northeast of the proposed facility would be deemed as low due to the relatively flat terrain and the moderate to high infiltration rates of the underlying soils which would prevent a release from migrating and reaching this drainage feature. Although the potential to impact actual surface water features has been deemed to be moderate, the potential to reach any flowing perennial drainages would be deemed to be

very low. Therefore with the potential for impacts to both perennial surface water and groundwater being deemed as low the facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 7/13/2013

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 Date: 7/9/2013

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