Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)			
Person(s) Conducting Field Inspection	Ashlee Lane		4/26/12
	Biologist		
Site Information			
Location:	GM 44-1		Time: 1100
Type of Facility:	Existing well pad		
Environmental Conditions	Partly cloudy, windy, soil conditions are dry.		
Temperature (°F)	80°		

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: Cornell Ditch, a seasonal irrigation ditch, and one USGS identified unnamed intermittent drainage.

   If yes, describe location relative to facility: Cornell ditch is 308 feet south and the unnamed ephemeral drainage is located approximately 1,200 feet to the north northeast 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. If a potential release were migrate off portions of the western and southern edges of the existing facility.

3. Is the potential to impact surface water from a facility release high or low?
   ☒ High If Cornell ditch is flowing (late spring through early fall)
   ☒ Moderate If Cornell ditch is not flowing (late fall through early spring)

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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):

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 are two USGS identified surface water features located within a quarter (1/4) mile of the existing facility. Cornell Ditch, a seasonal irrigation ditch, is located 308 feet south of the facility. Cornell Ditch eventually flows to and empties into the Colorado River. There is one USGS identified intermittent drainage located approximately 1,200 feet to the north northeast of the facility. It is not anticipated the unnamed USGS identified intermittent north of the facility would be impacted by a potential release due to the fact a ridgeline separates the unnamed drainage from the existing facility. The greatest potential for impact would be to Cornell Ditch located to the south of the existing facility. The facility, as it is currently constructed and proposed to be expanded, limits the flow directions of a potential release to portions of the western and southern edges along the fill slope portions of the facility. If a potential release were to migrate off the above mentioned edges of the facility, flow would be to the south following the natural contours of the area directly towards Cornell Ditch. In order to mitigate potential impacts to Cornell Ditch, it is recommended Best Management Practices (BMPs) be installed along the fill slope edges of the facility. When facility expansion occurs, BMPs in the form of an earthen perimeter berm should be installed along the graded edge and a diversion ditch should be constructed along the toe of the fill slope to contain any fluids that could potentially migrate off site. These should be monitored and maintained to ensure sight containment in the event of a potential release.

The State Engineers Office and USGS records were reviewed and no records were revealed that would provide additional information pertaining to the depth to groundwater. The vegetative cover in the immediate vicinity of the existing facility (sage brush, rabbit brush, shadscale, and snake weed, with some Piñon juniper woodland) does not suggest the presence of shallow groundwater. No seeps or springs were identified within the quarter (1/4) mile buffer zone during the site investigation.

Based on the information collected during the field investigation and desktop review, the potential to impact surface water features has been deemed moderate to high depending on the time of year. The potential to impact groundwater has been deemed low due to the fact no pit will be constructed on the facility and all cuttings and completion fluids will be managed on the surface. Due to the close proximity of Cornell Ditch, which ultimately empties into the Colorado River, the facility should be designated as being in a sensitive area.

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Inspector Signature(s): _____ Date: 4/27/2012

Mark E. Mumby, *Project Manager/RPG*
HRL Compliance Solutions, Inc.

_____ Date: 4/26/2012

Ashlee Lane, *Biologist*
HRL Compliance Solutions, Inc.