

## Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)		
<b>Person(s) Conducting Field Inspection</b>	None Conducted	
<b>Site Information</b>		
Location:	RWF 13-23	Time: 9:00 am
Type of Facility:	Existing Well Pad/Frac Support Pad	
<b>Environmental Conditions</b>	Sunny, clear skies, slight breeze, dry soil	
Temperature (°F)	68°	

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: The Colorado River and one non-USGS identified ephemeral drainage feature.

If yes, describe location relative to facility: The Colorado River is located 1,047 feet to the north and the one non USGS identified ephemeral drainage feature is located approximately 577 feet north 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

## 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  $\leq 1.0 \times 10^{-7}$  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

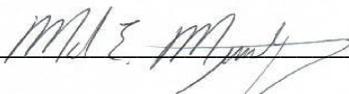
**Additional Comments:**

As stated in the surface water section of this sensitive area determination, a small branch of the Colorado River and a small non USGS identified ephemeral drainage feature are located within ¼ mile of the existing pad/frac support facility. The facility, as it is currently constructed and proposed to be utilized as a frac support pad, limits the direction of a potential release to a portion of the western side of the existing facility. A potential release, if it were to migrate of the western side of the existing facility, would migrate out into a relatively flat lying non irrigated field where it would infiltrate into the underlying soils and flow would be parallel to the unnamed ephemeral drainage feature.

Prior to being utilized as a frac support facility, it should be inspected to ensure that Best Management Practices (BMPs) are installed. If not currently installed, an earthen perimeter berm should be constructed along the graded edge of the fill slope sides. A diversion ditch should also be installed along the toe of the fill slope sides of the facility as well. All installed BMPs should be monitored and maintained to ensure site containment in the event of a potential release.

The State Engineers Office and USGS records were reviewed and one record was revealed which would provide additional information pertaining to the depth to groundwater in a similar topographic setting as that of the existing facility. One permitted irrigation well is located 1,657 feet to the southwest. The depth to water based on the well completion diagrams is noted to be at 61 feet. Therefore the depth to groundwater in the immediate vicinity of the existing facility could be assumed to be at or near the same depth as that in the above noted well.

Based on the information collected during this desktop review, the potential to impact both surface water and groundwater has been deemed to be low. The existing facility will not be utilized to store large amounts of fluids. The primary equipment on the facility will be hydraulic fracturing equipment to support completions operations on other nearby facilities. With the low potential for impacts to groundwater and surface water, the facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 2/6/2014

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