Sensitive Area Determination Checklist

Williams Production RMT Company			
Person(s) Conducting Field Inspection		Ashlee Lane *Biologist*	10/07/10
Site Information			
Location:	KP 33-21		Time: 1200
Type of Facility:	Existing Well Pad		
Environmental Conditions	Clear and calm		
Temperature (°F)	70°		

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:

   If yes, describe location relative to 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 tend to flow to the north following the natural topographical contours of the area.

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): Drilling pit.

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, the potential to impact surface water and/or surface water features has been deemed low. There are no surface waters or surface water features within a ¼ mile of the existing facility. The nearest surface water feature has been identified 2,180 feet to the west.

Best Management Practices (BMPs) in the form of an earthen containment berm surrounds the entire perimeter of the facility. A diversion ditch surrounds the eastern and southern boundaries. It is recommended that the existing BMPs be monitored and maintained throughout the life of the facility to ensure site containment integrity.

The State Engineer's Office and USGS records were reviews 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 facility, Piñon Juniper woodland, sage brush, oak brush and grasses does not suggest the presence of shallow groundwater.

Based on the information collected during the site investigation and desktop review, the potential to impact actual surface water features has been deemed to be very low. Based on the topographical setting of the existing facility the potential to impact ground water has been deemed low as well. Therefore the facility can be designated as being in a non-sensitive area.

Inspector Signature(s): _____ Date: 11/15/2010

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

_____ Date: 11/12/2010

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

PLANNING BMP's

- Share/consolidate corridors for pipeline ROWs to the maximum extent possible.
- Maximize the utility of surface facilities by developing multiple wells from a single pad (directional drilling), and by co-locating multipurpose facilities (for example, well pads and compressors) to avoid unnecessary habitat fragmentation and disturbance of additional geographic areas.
- Minimize newly planned activities and operations within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river.
- Locate roads outside of drainages where possible and outside of riparian habitat.
- Avoid constructing any road segment in the channel of an intermittent or perennial stream
- Avoid new surface disturbance and placing new facilities in key wildlife habitats in consultation with CDOW.
- Minimize the number, length, and footprint of oil and gas development roads
- Use existing roads where possible
- Combine utility infrastructure (gas, electric, and water) planning with roadway planning to avoid separate utility corridors
- Combine and share roads to minimize habitat fragmentation
- Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development
- Design roads with visual and auditory buffers or screens (e.g., topographic barriers, vegetation, and distance).
- Maximize use of remote completion/frac operations to minimize traffic
- Maximize use of remote telemetry for well monitoring to minimize traffic

CONSTRUCTION BMP's

- Structures for perennial or intermittent stream channel crossings should be constructed using appropriately sized bridges or culverts
- Design road crossings of streams at right angles to all riparian corridors and streams to minimize the area of disturbance to the extent possible.

DRILLING/COMPLETIONS BMP's

- Use centralized hydraulic fracturing operations.
- Install and maintain adequate measures to exclude all types of wildlife (e.g., big game, birds, and small rodents) from all fluid pits (e.g., fencing, netting, and other appropriate exclusion measures).

PRODUCTION/RECLAMATION BMP's

- Utilize staked soil retention blankets for erosion control and reclamation of large surface areas with 1.5:1 or steeper slopes. Avoid use of plastic blanket materials.
- Remove well pad and road surface materials that are incompatible with post-production land use and re-vegetation require¬ments
- Use only certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife
- Williams will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeding and reclamation of disturbed areas.
- Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings.
- Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors.
- Avoid dust suppression activities within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river where possible.
- Install and use locked gates or other means to prevent unauthorized vehicular travel on roads and facility rights-of-way.