

Sensitive Area Determination Checklist
SG Interests I, Ltd.

Person(s) conducting inspection	Eric Sanford	
Site Information	T12S R89W Section 5	
Location:	Buck Creek 12-89-5 #1	Date: 10-29-2012 Time: approx. 10:00 a.m.
Type of Facility:	Natural gas well	
Environmental Conditions	Sunny, dry	
Temperature	40's	

Has the proposed, new or existing location been designated as a sensitive area?

Yes X No _____

SURFACE WATER

- 1) Are there any surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new facility?

Yes X No _____

If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands:

There are irrigation ditches in close proximity to the planned well pad. There are two ditches up gradient and east of the planned well head; one is 135' away (will likely be rerouted) and the other is 314' away. A third ditch is down gradient from the project and is 355' west of the planned well head (see hydrology map attached to Form 2A).

Could a potential release from the facility reach surface water features?

Yes X 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 release from the facility could impact surface waters if it were allowed to drain into the irrigation ditch and be carried into Muddy Creek.

- 2) Is the potential to impact surface waters from a facility release high or low?

High X Low _____

GROUNDWATER

- 3) Will the proposed/new or existing facility have any pits that will contain hydrocarbons and chlorides or other E&P wastes?

Yes X No _____

If yes, list the pit types(s): Drilling pits that will be lined and temporary.

- 4) Is the hydraulic conductivity of the underlying soil or geologic material $\leq 1.0 \times 10^{-7}$ cm/sec?

Yes _____ No X

This soil is characterized as well drained. Its Ksat value is moderately high.

- 5) Is the proposed facility located within 1/8 mile of domestic water well or 1/4 mile of a public water supply well which would use the same aquifer?

Yes _____

No X (Nearest domestic water well [#62417] is \approx 1/5 mile to NW.)

- 6) Is the proposed facility located within a 100-year floodplain?

Yes _____

No X (See floodplain map.)

- 7) Is the depth to groundwater known?

Yes _____ (If yes, follow instructions provided in 6(a) of this section.)

(a) If yes, could a potential release from the proposed facility reach groundwater?

Yes _____ If yes, explain:

No X (If no, follow instructions provided in 6(b) of this section.)

(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 Engineer's Office.

No. There is no riparian vegetation at the location. Soil type in this area is not a wetland soil type. The closest water well to the project (# 62417) is 50' deep. It is located adjacent to Muddy Creek.

- 8) Is the potential to impact groundwater from the facility in the event of a release high or low?

High _____

Low X

The drilling pits will be lined to prevent contact between pit contents and groundwater. They will be removed and backfilled following the drilling operations.

Additional Comments: All equipment should arrive on site clean and free of leaks or other maintenance needs that could result in a spill. Proper containment should be used by contractors when delivering or working with liquids that could spill. Spills during operations must be stopped and cleaned up immediately to prevent migration of that material toward groundwater or surface waters. Secondary containment of any fluids stored on site during operations will prevent leaks from containers from reaching surface or ground waters. The well pad should be bermed around the outside edge to prevent a spill on the pad from draining off before it can be cleaned up.

Signature _____



Date: _____

3-20-13