Bratcher, Mike, EMNRD

2RP-1291

From: Gregston, Terry G <tgregsto@blm.gov>
Sent: Friday, September 07, 2012 3:44 PM
To: tainsworth@cimarex.com; tstathem@cimarex.com
Cc: Bratcher, Mike, EMNRD
Subject: Undesirable Event: NU12193TG, CK 7 Federal 1: Archeological clearance; notification of cave/karst and groundwater concerns
Attachments: CK 7 Federal 1 and 2-090212 spill-090512- 025.jpg; CK 7 Federal 1-090212 spill map-090512.jpg; CK 7 Federal 1-storage tank APD COAs-090712.pdf

Mr. Ainsworth, Ms. Strathem,

This notification is in regard to the following location and undesirable event:

Event Number: NU12193TG
Event Date: 9/2/2012
Event Name: CK 7 Federal 1
Legals: T24S/R26E, sec. 7, SWNE

Archeology
This event falls within previously surveyed archeological space. No known archeological sites exist within proximity to the event site and the operator has archeological clearance to begin immediate cleanup operations.

Cave/Karst Concerns:
This spill event is in a cave and karst area ranked as "critical" due to its proximity to known cave and karst features that are connected with the recharge of the Capitan Reef aquifer. A known cave system downslope of the spill has direct access to the Capitan Reef. While the spill itself did not enter the cave feature, runoff from the spill event and any spillage that entered into rock cracks or karst features beneath the battery have a high potential of finding an egress route into both the cave system and the Capitan Reef aquifer that is associated with that cave system.

APD COAs
During the onsite inspection of this spill event, it was found that the tank battery on this location was not built according to APD COAs. The conditions of approval on the drilling permit for this well stated that the tank battery should have a "permanent liner" installed as well as a leak detection system. The tank battery on this location was built without a liner or leak detection and the containment berms were constructed of highly porous gravel. As a result, the spill permeated the battery containment berms and soaked into bedrock cracks and cave/karst features very rapidly.

Compressor Concerns:
There was also spillage on this location around the compressor. It is likely that the compressor is not lined, either. Compressors often have BTEX and heavy metals components in the spillage that comes off of the compressor. Due to the cave/karst and associated groundwater concerns on this location, the compressor spillage issues need to be addressed in concert with the tank battery concerns.

Leaking wellhead:
One of the wellheads has a slow but long term produced water drip. The source of this release needs to be addressed so that wellhead contaminants do not create additional contamination issues on this location.

Signs
One of the wells on this location does not have the required well sign.

Unnetted Catchments

Catchments on this location placed under chemical barrels are not properly netted and/or have large holes in the netting.

Leaking Chemical Barrel

There is a barrel with signs of leakage by the compressor and several other unmarked chemical barrels on the location. All chemical barrels on this location that are not associated directly with or in direct use with current production operations should be removed. This location is not a good location to store chemical barrels, either empty or full, due to the cave/karst concerns on this site. Chemical barrels should be brought in as needed; not stored on site.

Summary:

The spill impacts on this location need to be address as soon as possible. Cleanup crews should take special care to ensure that bermed containment with a plastic liner (that goes up and over the berms, rather than lying flat on the ground) should be used to stockpile contaminated materials during spill cleanup and contaminated soil removal operations. The tank battery needs to be built according the APD Conditions of Approval for this location. All contaminants on this location, whether associated with wellheads, tank battery, compressors, chemical barrels, or load lines should be picked up and removed as soon as possible. Ensure that cleanup crews clean up these contaminated areas to the greatest extent possible.

Attached is a spill map, jpg photo of the spill in the pasture, and a digital copy of the APD COA's related to the tank battery requirements.

Thank you for your attention to these concerns. If you have any questions, feel free to call me (my cell phone number is best).

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C K 7 FEDERAL #001
C K 7 FEDERAL #001
C K 7 FEDERAL #002
C K 7 FEDERAL #002
Spill Saltwater 01452

SPECIAL STIPULATIONS
for
Gruy Petroleum Management Co.
C K Federal 7 #1

Surface Mitigation
Whether or not a proposed activity has been relocated to reduce potential impacts on caves or karst, the following stipulations will applied to minimize the risk of impacts during construction, drilling and production.

1. A closed mud system with steel tanks will be utilized to drill the well. All cuttings and fluids will be hauled off site to be disposed off. (No cuttings pit).
2. Berms will be constructed around any storage tanks, used in drilling or production, to prevent a spill. The berms will be constructed large enough to contain one and a half times the tanks capacity.
3. A leak detection system will be installed for pipelines and tanks used in production or drilling.
4. A permanent liner will be installed in storage tank areas.
5. The use of a stock tank vapor recovery system will be installed.
6. The V-Door will be faced east.
7. All production facilities, appurtenances, pipelines, and other above ground structures will be "low profile" (less than 8 feet in height) and painted a non-reflective (Flat) Juniper Green.
8. The approved site location will be fenced on all sides to contain operation activities.
9. All construction activities will be monitored by BLM.

Subsurface Mitigation
The following stipulations will be applied where the presence of caves or karst is obvious or expected, based on the results of detection efforts, and in lost circulation zones.

1. Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst are expected. Below those zones, the operator may use whatever drilling fluid is approved in the drilling plan.
2. All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.
3. A"cave protection casing will be required in instances when a designated significant cave would be jeopardized. The cave-protection casing string would be set at least 100 feet below the deepest known cave-bearing zone as determined by drilling or other pertinent methods. All casing strings will be cemented to the surface.
4. **Regardless of the type of drilling machinery used, if a bit drops of four feet or more and circulation losses greater then 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the Operator. The**

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