

STATE OF  
COLORADO

EnviroScan - DNR, OGCC &lt;dnr\_ogcc.enviroscan@state.co.us&gt;

**RE: CM Productions: Rice Location Sensitive Area Determination**

1 message

**James Hix** <jhix@olssonassociates.com>

Tue, Jan 13, 2015 at 6:03 PM

To: "Axelson - DNR, John" &lt;john.axelson@state.co.us&gt;

Cc: "Ferrin - DNR, Jeremy" &lt;jeremy.ferrin@state.co.us&gt;, "Mueller, Kirk" &lt;Kirk.Mueller@dgsllaw.com&gt;, "Curtis Ditzell (curtis@cmproductionllc.com)" &lt;curtis@cmproductionllc.com&gt;, "rob.young@state.co.us" &lt;rob.young@state.co.us&gt;, OGCC EnviroScan - DNR &lt;ogcc.enviroscan@state.co.us&gt;, Greg Deranleau - DNR &lt;greg.deranleau@state.co.us&gt;

John,

Attached is a letter that we received from Rodney Dunker – Operations Manager with Y-W Electric regarding the power poles at the Oliver Warren #1 site. He indicates that removing the guy wires/anchors will impact the Petron Development Company to the west of the site.

Olsson and CM will finish delineating the impacts on the northwest corner of the former skim pit at the Oliver Warren #1 site in accordance with Rule 909.b.(2) We will hand auger down at locations to the north and below the depth of the side wall sample, CMOW-PC-7 N/W 1/2, which was collected at a depth of 7 feet below ground surface where impacted soil remains in place. The DRO result for this sample was reported at 7,940 mg/kg and the only PAH that was above the Table 910-1 concentration was an estimated concentration of benzo(a)pyrene reported at 0.441 (J) mg/kg. The total concentration of all PAH reportedly detected in this sample was approximately 10.55 mg/kg. The results for the other six soil samples showed that PAHs were not detected.

Attached are some tables from a 2006 USGS study of PAHs from parking lot seal coat products. Unsealed asphalt has PAH concentrations that range from 10 mg/kg to 100 mg/kg, and seal coat products add many more PAH compounds in much higher concentrations depending on whether it is derived from petroleum products or coal tar. The USGS provides a probable effect concentration (PEC) of 23 mg/kg. My point in providing this information is that PAH are ubiquitous in the environment, and occur in much higher concentrations at the ground surface. The public has the potential to be routinely exposed through inhalation and ingestion of PAH from a multitude of sources, and while those sources should be minimized, it would seem that if PAH impacted soils are buried they pose less risk.

It is widely accepted that PAHs are immobile in the environment and typically do not leach to groundwater. According to the division of water resources the static water levels for wells in the area of the Oliver Warren site are approximately 170 feet to more than 200 feet bgs. There are no surface water bodies located near the Oliver Warren site. CM has excavated the majority of the impacted soils from the former skim pits at the Oliver Warren site and will remediate these impacted soils to meet the Table 910-1 concentrations. It may not be practicable to excavate all of the impacted soil at this location, but we will delineate the extent of the impacts, assess the volume remaining, and see if there is an acceptable alternative to treating these soils in place.

James

James W. Hix, PG | **Olsson Associates**

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**From:** Axelson - DNR, John [<mailto:john.axelson@state.co.us>]

**Sent:** Friday, December 19, 2014 1:35 PM

**To:** James Hix

**Cc:** Ferrin - DNR, Jeremy; Mueller, Kirk; Curtis Ditzell ([curtisd@cmproductionllc.com](mailto:curtisd@cmproductionllc.com)); [rob.young@state.co.us](mailto:rob.young@state.co.us); OGCC EnviroScan - DNR; Greg Deranleau - DNR

**Subject:** Re: CM Productions: Rice Location Sensitive Area Determination

James,

Thank you for providing the information. Regarding the disposal of tank bottoms from the Rice Lease in Logan County (Rem #8517), please submit the disposal documentation when the manifests are received with a request for no further action.

Regarding the oily waste remaining in place near the power pole at the Oliver Warren location in Washington County (Rem #8209), CM is required to finish delineating the horizontal extent of contamination in accordance with Rule 909.b.(2). Once the aerial extent is delineated, CM shall provide an estimate of the volume of waste left in place, estimate of the average TPH-DRO concentration and submit a specific remediation plan for in-situ treatment. Please include a scaled site diagram depicting the extent of the oily waste, the power pole and anchors and sample locations based on GPS coordinates.

COGCC suggests that CM meet with the utility company on location to make sure they understand the specific power pole in question. Based on review of aerial photos, it appears the pole on the CM lease was installed specifically to provide an electric drop for that lease. The main power line runs north/south on the opposite (west) side of the road. There may be an easy way to temporarily disconnect service to the lateral drop to the Oliver Warren lease without affecting other leases or residences. If that is the case, additional excavation and sampling could be performed safely and expeditiously to remove any remaining waste.

Please finish the delineation and submit a work plan for in-situ remediation, or meet the utility company on location and if the power drop can be isolated and de-energized, complete final excavation of remaining oily waste and confirmation sampling. In either case perform the work and provide the required documentation no later than January 31, 2015.

Also, if CM would like to collect samples along the shoulder of Hwy 34 and analyze for PAHs, COGCC would be interested in reviewing those results.

Thank you,

John E. Axelson, P.G.  
East Environmental Supervisor



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Cc. NOAV Doc #s 200390913, 200399090 - Correspondence

Rem #s 8209, 8517 - Correspondence

On Thu, Dec 18, 2014 at 4:06 PM, James Hix <[jhix@olssonassociates.com](mailto:jhix@olssonassociates.com)> wrote:

Jeremy and Kirk,

As your email subject line references, and Rob Young can attest, I was out Monday and Tuesday this week performing the site specific subsurface investigation at the Rice Lease. Attached are photographs of the area where the oily waste ("tank bottoms") were excavated and removed from the Rice location. The overburden soils and impacted oily soil stockpile have been removed from the site. I showed Rob where the oily waste had been excavated and removed from the Rice location when we were onsite earlier this week. CM Production coordinated with Gardiner's Gophers and with Waste Management. The soils were hauled to the North Weld County landfill in Ault, Colorado earlier this month. Usually it takes Waste Management a month or more to send the waste manifests. Copies of those can be provided to the COGCC once they are received.

We discussed the power pole issue in our telephone call on 12/3/2014. On 12/4/2014, I called Y-W Electric - the utility that is responsible for the power pole at the Oliver Warren Location. The first response of the Y-W Electric Operations Manager was "Stay at least 10 feet away from the power pole and anchors." I then spoke with Rod Dunker, one of Y-W Electric's "staking guys," and explained the situation to him that CM needs to excavate impacted soil near the deadmen anchors and guy wires for the last power pole in a series. He said that they may be able to bring a truck out and attach the guywires to a truck while the additional excavation is performed, but that they would need to look at it. Since the guy wires are in the area that needs to be excavated, the truck would also need to be parked on top of the area to be excavated in order to support the lines. Rod said that they would need to de-energize the line or support the line in another way. It will require that the fill soils be compacted if the deadmen have to be removed. Then Y-W Electric will need to re-install the deadmen anchors and reattach the guywires and be confident that the series of power poles are going to be supported. If they de-energize the line, that will shut-in the operator of the oil wells to the west, and the houses in

the area for an undetermined amount of time. Even with requesting rush turn-around from the laboratory for the samples, this will likely take a few days, at a minimum.

Is there an option of treating the soil in place with a commitment to come back and collect confirmation soil samples at a date within a year? If the soils still show DRO above the Table 910-1 concentration level of 500 mg/kg we may need to re-treat, and sample again, with a firm deadline of three years from the date of first treatment as a final completion date. If the soils do not meet the Table 910-1 concentration level of 500 mg/kg DRO at that time, CM Production would be required to contract with Y-W Electric to remove the deadmen anchors and excavate the impacted soil. CM has responded to the remediation of the skim pits impacted soil, has excavated the impacted soil, and is committed to land farming the impacted soil.

Since the impacts that were identified were at seven feet below ground surface, Olsson can prepare a work plan and a Form 27 to assess the impacts in place, treat those impacts, and then a year from the treatment date, come back and collect confirmation soil samples. The other side wall samples collected from the north wall to the east were not above Table 910-1 standards, so it is very possible that these are of limited aerial extent. The soils were impacted with diesel range organics (DRO) and low levels of polynuclear aromatic hydrocarbons (PAHs). The PAHs are not going to leach to groundwater and are not mobile in the environment.

The DRO must be cleaned up to the Table 910-1 level of 500 mg/kg, but since it is not a "compound specific" analytical method, it is used as a screening tool to see if PAH analysis is warranted. Since PAH analysis of impacted soil is already required in Table 910-1, and the analyses were performed in March 2014 and in September 2014, we know the levels of these compounds present in the soils.

Most of the PAH compounds were not detected, or were below Table 910-1 concentration levels. Only benzo(a)pyrene was reported above the Table 910-1 standards in one soil sample, which was also the soil sample that also had a DRO result of 7,940 mg/kg as shown in the attached table. The reported depths to groundwater in the area based on DWR permitted water well records indicate that the depth to groundwater is between 170 feet to 340 feet below ground surface. Migration to groundwater is unlikely.

These skim pit soils are E&P wastes that need to be remediated to meet Table 910-1 standards for DRO and benzo(a)pyrene. However, for perspective, the surface soils along the shoulder of Highway 34 about a mile to the south, would very likely have much higher PAH concentrations. Excavation of the remaining impacts seems excessive in this situation.

James

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**From:** Ferrin - DNR, Jeremy [mailto:[jeremy.ferrin@state.co.us](mailto:jeremy.ferrin@state.co.us)]  
**Sent:** Thursday, December 18, 2014 1:38 PM  
**To:** Mueller, Kirk  
**Cc:** [john.axelson@state.co.us](mailto:john.axelson@state.co.us); James Hix  
**Subject:** Re: CM Productions: Rice Location Sensitive Area Determination

All,

According to my notes from our last conference call, CM was supposed to submit a plan for the "powerpole" issue at the Warren location and a plan for disposal of the tank bottoms at the Rice location. John and I have not seen a plan addressing either issue.

Please advise.

Jeremy I Ferrin  
Enforcement Officer



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On Thu, Dec 4, 2014 at 3:44 PM, Mueller, Kirk <[Kirk.Mueller@dgslaw.com](mailto:Kirk.Mueller@dgslaw.com)> wrote:

Jeremy/John:

Thank you and your staff for visiting with me and James yesterday regarding the NOAV at the Rice Location. James has contacted a vendor, Site Services Drilling, which has a combination probe/solid stem auger rig mounted on a rubber track that we believe can access the locations we want to sample. Site Services also has hollow stem auger rigs which may be able to drill the proposed locations. James has forwarded to them photos and illustrations of the site to determine if they can and to estimate the time to get up there and do the work. James estimates we will need to go to 25 or 30 feet or to auger to refusal; he will coordinate with John Axelson regarding locations and other specifics. If we encounter shallow groundwater, we can set monitoring wells and collect samples for analysis. James is optimistic we can access and drill the wells on or before December 19. The sample results from those wells should be ready on or by December 31, with consideration of the holidays. If water can be collected, we expect sampling and analysis could be completed on or by January 2, 2015.

We have also had discussions CM's operations folks and informed them of your directive that they cease delivery of produced water to all three of the pits. Compliance with this directive will require CM to shut-in the field and cease all production which, in turn, will create a significant hardship for CM and forfeiture of revenues for an apparently indeterminate length of time. Given the hardship, and for the reasons discussed below, CM respectfully has asked if the commission might reconsider its position and allow CM to continue to using just the south pit to contain produced water. Shutting in the field in the winter may cause lines to freeze and break causing releases of produced water that would not occur if the field were operating.

Olsson will provide a work plan and a Form 27 tomorrow that outlines the proposed drilling locations and a description of the rigors of the assessment. Upon approval of the work plan, Olsson will confirm with Site Services the drilling schedule.

Olsson and CM were under the impression that if we collected surface water samples in the drainage and installed the hand auger point down gradient of the pits, that would be sufficient assessment as we had discussed. The piezometer alone was not expected to satisfy the COGCC, but it does extend 10 feet below the base of the main drainage, and was dry in July and again when checked in September.

Given the hardship posed by shutting in the field, the generally promising indications of the sensitive area study thus far, the fact that pits have existed at this location for decades, previous investigations concluded that it was not a sensitive area, and the accelerated schedule we are endeavoring to implement, we would very much appreciate the Commission's permission to utilize just the south pit for an additional 60 days while we complete the sensitive area study.

Thank you for your attention to this, and best regards,

- Kirk

**R. KIRK MUELLER** ATTORNEY

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## **Davis Graham & Stubbs LLP**

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### **3 attachments**



**YW Electric Lette to CM Production Olive Warren 1-11 Utility Pole.pdf**  
130K



**PAH Parking Lot Sediment.pdf**

239K



**PAH Sealcoat Products.pdf**

268K