

R. T. HICKS CONSULTANTS, LTD.

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March 20, 2015

RECEIVED

By OCD; Dr. Oberding at 7:55 am, Mar 23, 2015

Dr. Tomás Oberding
NMOCD District 1
1625 French Drive
Hobbs, New Mexico 88240
VIA EMAIL

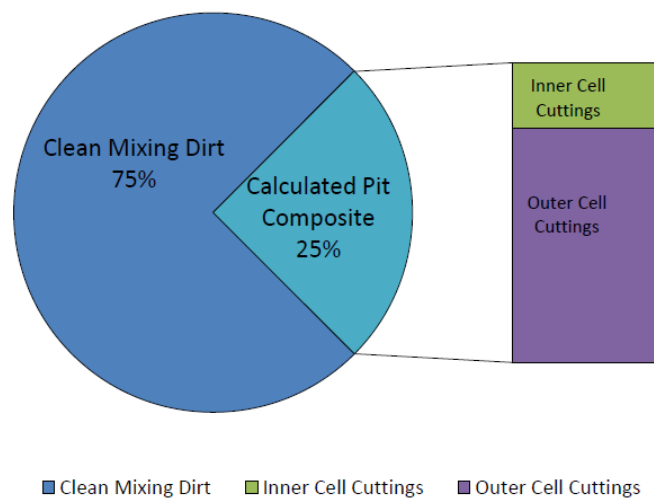
RE: Murchison - Bettis 20 St. Com #4H Temporary Pit, In-place Burial Notice
API #30-025-41438, Pit Permit #P1-06548
Unit N, Section 20, T24S, R33E, Lea County

Dr. Oberding:

On behalf of Murchison Oil and Gas, R. T. Hicks Consultants is provides this notice to NMOCD with a copy to the State Land Office (email as approved by NMOCD on 1/7/2015) that closure operations at the above- referenced pit will begin on **Wednesday, March 25, 2015**. Please note that we enclose a previously-approved variance to substitute TPH via 8015 method (GRO+DRO+MRO) in lieu of method 418.1. The closure process should require about two weeks, depending on the availability of machinery and weather conditions. The "In-place Burial" closure plan for the pit was submitted with the C-144 temporary pit application and NMOCD approved the plan on May 8, 2014. The rig was released on June 25, 2014. Closure sampling of the pit contents occurred on December 4, 2014 but the laboratory analyses were not scheduled to return before the December 25 deadline. A 3-month extension for closure was approved by NMOCD on December 18, 2014.

The samples collected on December 3-4, 2014 consisted of a 4-point composite from the inner horseshoe cell, a 4-point composite from the outer horseshoe cell, and a 5-point composite from the clean soil of the berms (beneath the liner) that will be used for stabilization mixing. The table on page 2 of this notice demonstrates the calculated concentration for "3:1 stabilized" material that results when the pit contents are combined with available mixing soil during the closure process. The calculated value mathematically mixes 3 parts clean soil (mixing dirt) with 1 part of the weighted pit composite calculation, as depicted in the adjacent chart.

Composition of "3:1 Stabilized Cuttings"
Bettis 20 St. Com #4H pit



The pit composite consists of 21.74% solids from the inner cell of the drilling pit and 78.26% of the solids from the outer cell (1:3.6 ratio), representative of the volume of cuttings in each cell.

Bettis 20 St. Com #4H pit Sample Name	Sample Type	Sample Date	Chloride 80,000	Benzene 10	BTEX 50	GRO+ DRO 1000	TPH GRO+DRO +MRO 2500
Inner Composite	4-pt field comp.	12/4/2014	69000	ND	0.75	345	400
Outer Composite	4-pt field comp.	12/4/2014	7900	0.21	5.19	3170	8800
Mixing Dirt	5-pt field comp.	12/3/2014	ND	ND	ND	ND	ND
3:1 Stabilized CALCULATED (3 parts mixing dirt, 1 part weighted pit cuttings)			5,295.79	0.04	1.06	638.96	904.18

ND = Not detected at the laboratory's reporting limit

All values are mg/kg

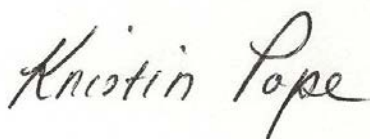
The formula used in the table:

$$3:1 \text{ Stabilized Solids} = \frac{[(\text{Outer Composite} \times 0.7826) + (0.2174 \times \text{Inner Composite})]}{4}$$

Laboratory analyses of the component samples and the calculation of stabilized cuttings "demonstrate that, after the waste is solidified or stabilized with soil or other non-waste material at a ratio of no more than 3:1 soil or other non-waste material to waste, the concentration of any contaminant in the stabilized waste is not higher than the parameters listed in Table II of 19.15.17.13 NMAC." I will follow up this notice to you with a phone call today as required by the Pit Rule.

Sincerely,

R.T. Hicks Consultants



Kristin Pope

Enclosure: Variance approval for email to SLO, variance approval for TPH substitution

Copy: Murchison Oil and Gas, New Mexico State Land Office (Ed Martin)

From: [Oberding, Tomas, EMNRD](#)
To: [Kristin Pope](#)
Cc: [ccottrell@jdmii.com](#); [Randy Hicks](#); [gboans@jdmii.com](#); [Chace Walls](#); [Martin, Ed](#)
Subject: RE: VARIANCE REQUEST: Email substitution for pit closure notices
Date: Wednesday, January 07, 2015 10:13:08 AM

Ms. Pope,

This email is fine for OCD documentation, for the current site closure.

Mahalo

-Doc

Tomáš 'Doc' Oberding, PhD
Senior Environmental Specialist
New Mexico Oil Conservation Division, District 1
Energy, Minerals and Natural Resources Department
(575) 393-6161 ext 111
E-Mail: tomas.oberding@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

From: Kristin Pope [<mailto:kristin@rthicksconsult.com>]
Sent: Wednesday, December 31, 2014 1:35 PM
To: Oberding, Tomas, EMNRD
Cc: [ccottrell@jdmii.com](#); [Randy Hicks](#); [gboans@jdmii.com](#); [Chace Walls](#); [Martin, Ed](#)
Subject: VARIANCE REQUEST: Email substitution for pit closure notices

Dr. Oberding:

Please find the attached variance request for a substitution of email to SLO in lieu of temporary pit closure notices submitted via US Mail, return receipt requested. It is referenced for the Murchison – Jackson Unit #14H but I also submitted a closure report for the Jackson Unit #16H.

Please contact me with any questions about this upon your return to work. Thank you.

Kristin Pope
R.T. Hicks Consultants
Carlsbad Field Office
575.302.6755

From: [Oberding, Tomas, EMNRD](#)
To: [Kristin Pope](#)
Cc: [ccottrell@jdmii.com](#); [Chace Walls](#); [gboans@jdmii.com](#); [Randy Hicks](#); [Griswold, Jim, EMNRD](#)
Subject: RE: VARIANCE REQUEST: Murchison - Jackson Unit #17H
Date: Thursday, December 18, 2014 8:16:05 AM

Aloha Ms. Pope et al,

Thank you for sending in this variance request.

After discussions, OCD approves the substitution of 8015 B, C, or D for 418.1. Hydrocarbons between C6 and C36 must be included in the results.

As 8015M appears to cover GRO+DRO+MRO- this too is an appropriate alternate methodology.

Thank you for continuing to work with the OCD.

Please let me know if you have any questions.

-Doc

Tomáš 'Doc' Oberding, PhD
Senior Environmental Specialist
New Mexico Oil Conservation Division, District 1
Energy, Minerals and Natural Resources Department
(575) 393-6161 ext 111
E-Mail: tomas.oberding@state.nm.us

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If you have any questions or concerns, and for notification, please contact me.

From: Kristin Pope [mailto:kristin@rthicksconsult.com]
Sent: Tuesday, December 16, 2014 7:51 AM
To: Oberding, Tomas, EMNRD
Cc: [ccottrell@jdmii.com](#); [Chace Walls](#); [gboans@jdmii.com](#); [Randy Hicks](#); [Griswold, Jim, EMNRD](#)
Subject: VARIANCE REQUEST: Murchison - Jackson Unit #17H

Dr. Oberding:

Please find the attached variance request we discussed over the phone last week. During our phone call, I was mistaken on the closure deadline for this site; the closure deadline for this is January 14, 2015. Per our discussion, note that I've copied Jim Griswold on this submission.

Please let me know if we can assist NMOCD's review in any way. Thank you.

Kristin Pope
R.T. Hicks Consultants

From: [Andy Freeman](#)
To: ["Kristin Pope" \(kristin@rthicksconsult.com\)](mailto:kristin@rthicksconsult.com)
Subject: Hydrocarbon Ranges
Date: Monday, December 29, 2014 1:31:31 PM

Hi Kristin,

I have the hydrocarbon ranges listed below.

GRO C6-C10
DRO C10-C28
MRO C28-C36

Have a great New Year.

Thanks

andy