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6/23/05-9:48 AM.

Charles N. Lakins clakins@domenicilaw.com

Lorraine Hollingsworth Ihollingsworth@domenicilaw.com

June 23, 2005

VIA FACSIMILE (505) 476-3462

No Pages: 14

Florene Davidson Hearing Clerk EMNRD Oil Conservation District 1220 So. St. Francis Drive Santa Fe, NM 87505

Pete V. Domenici, Jr.

pdomenici@domenicilaw.com

Jeanne Cameron Washburn

jwashburn@domenicilaw.com

Case No. 13480; Fax Filing of Second Notice of Filing

Dear Ms. Davidson:

Re:

Please find attached the GMI's Second Notice of Fax Filing. Due to the size of the attached drawings, they are not being faxed but are being sent via Federal Express. The originals that are being faxed are being sent with the drawings. Upon receipt, please endorse the extra copy and return to our office in the enclosed stamped envelope.

Thank you for your courtesies in this matter.

Sincerely,

DOMENICI, LAW FIRM, P.O.

srr/1548 attachment cc: file

9

## STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONVERSATION DIVISION

APPLICATION OF GANDY MARLEY, INC. TO MODIFY THEIR EXISTING NMOCD RULE 711 PERMIT NO. NM-01-019

**CASE NO. 13480** 

#### SECOND NOTICE OF FILING

**COMES NOW** the Applicant, Gandy Marley Inc. (GMI), by and through undersigned counsel of record, and respectfully provides Notice of Filing the attached documents as a comment to the record. The filing includes the following:

- 1. Comment from MWH (Pat Corser) with attachments.
- 2. Engineering drawings for the proposed cell design.

Respectfully Submitted,

Pete V. Domenici, Jr. Esq.

Attorney for Gandy Marley Inc.

6100 Seagull Street NE, Suite 205

Albuquerque, NM 87109

(505) 883-6250

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I hereby certify that a true and correct copy of the foregoing was sent via facsimile and U.S. mail to parties of record on the day of June, 2005.

Pete V. Domenici, Jr., Esq.

W 55 6/21/65



Pete Domenici 6100 Seagull St. NE Suite 205 Albuquerque, NM 87109

Re: MWH Comments on OCD Proposed Permit Conditions for Gandy Marley, Inc. Permit No. NM-01-109

Based on your request, we have reviewed the proposed Permit Conditions for Case No. 134480, prepared by Ed Martin of NMOCD dated June 14, 2005. MWH is in general concurrence with the permit conditions presented in this document. However, there are several items of concern presented below and our suggested changes to the permit conditions to address them. In addition to the permit concerns, we have attached the results of a waste sampling study of materials typical of oil field wastes being delivered to the site. We are also requesting a clarification of some of the data that was presented by CRI during the hearing.

#### 1. Landfill Operation:

Item 2: As the landfill cell fills, the contaminated material will be covered, progressively with a 1 foot thick clay cap, compacted to  $1 \times 10^{-7}$  cm/sec permeability, and a minimum of 2 feet of clean soil.

MWH is concerned with two issues for the cover. Due to the very soft nature of the materials that will be placed in the landfill, it will very difficult to obtain the required compaction of the 1-foot thick clay layer to achieve the 1x10-7 cm/sec requirement. Secondly, the clay will be subject to surficial environmental influences even though it is buried 2 feet below the surface. The clay could develop desiccation cracks that could substantially increase the clay layer permeability. Therefore we propose that a 3 foot thick evapotranspiration (ET) cover be installed that is not subject to desiccation cracking.

Item 6: Any precipitation that accumulates in the landfill cell will be removed within 24 hours.

The facility is usually closed on the weekends; therefore, we propose that precipitation be removed within 72 hours which accounts for the time after closure on Friday, the weekend, and time on Monday to remove the water.

#### 2. Landfarm Operation:

Item 7: There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within twenty-four (24) hours of discovery.

The facility is usually closed on the weekends; therefore, we propose that precipitation be removed within 72 hours which accounts for the time after closure on Friday, the weekend, and time on Monday to remove the water.

Item 16b: Reports of the analyses shown in item 9 above will be forwarded to the OCD Santa Fe office no later than April 30, July 31, October 31, and January 31 of each year that the facility is in operation, and also maintained on site for OCD review.

Tel: 970 879 6260

Fax 970 879 9048

It appears that item 9 referenced should be item 16.a.

#### 3. Tank Bottom Acceptance

Item 3: Material received at the impoundment must be missed and stabilized immediately.

It appears the word "missed" should be replaced with the word "mixed".

#### 4. OVERALL FACILITY OPERATION

Item 6: The landfill cells may not contain any free liquid. Any ponding of precipitation must be removed within 24 hours of discovery.

The facility is usually closed on the weekends; therefore, we propose that precipitation be removed within 72 hours which accounts for the time after closure on Friday, the weekend, and time on Monday to remove the water.

Item 7: Landfill cell inspection and maintenance must be conducted at least daily and immediately following each consequential rainstorm or windstorm.

As stated previously, the facility is normally not open on weekends. Therefore, we propose that the landfill inspection and maintenance be completed during days that the facility is open.

#### WASTE TESTING

Since the hearing, a composite sample of the drilling mud waste was taken from Cell #21 at the Gandy Marley landfarm. The sample was obtained by CMB Environmental & Geological Services, Inc. (CMB) on June 8, 2005 and submitted to Trace Analysis Laboratory for analytical testing. The results are summarized below:

Chloride – 10,200 ppm TPH DRO – 512 ppm TPH GRO – 17.7 ppm Xylene - 0.0497 ppm

These values are below the concentrations stated in RCRA 40CFR268.48 universal treatment standards which is in agreement with the assumption that drilling mud waste should not be considered a RCRA regulated waste. Additional information regarding the sampling by CMB Environmental and the testing by Trace Analysis Laboratory is presented in Attachment A, Waste Sampling and Testing.

#### **CRI Presentation Materials**

As part of CRI's presentation during the hearing, they presented a Table 1.2 (see Attachment B, Table 1.2) which listed multiple contaminant's commonly found in oil well treatment and completion fluids and their average concentration as stated by the EPA (EPA, 2000). Pollutant concentrations units shown on Table 1.2 are listed in mg/l; however, the correct units should be μg/l. In addition, flouride and total dissolved solids are presented in Table 1.2 and they should be flourene and total suspended solids respectively.

## References

EPA, October 2000, EPA Office of Compliance Sector Notebook Project, Profile of the Oil and Gas Extraction Industry.

# ATTACHMENT A



Clayton M. Barnhill
CMB
Environmental & Geological
P.O. Box 2304
Roswell, NM 88202-2304
Tel (505) 622-2012
Fax (505) 622-2012
E-mail: cmbenviro@dfn.com

Mr. Bill Marley Gandy Marley, Inc. PO Box 1658 Roswell, NM 88202-1658

June 20, 2005

Re:

Second Quarterly Sampling Event 2005

Composite Grab Sample Cell # 21

Gandy Marley Landfarm Chaves County, NM

NMOCD Discharge Permit NM-711-1-0020

Dear Mr. Marley:

Attached is a copy of the laboratory analysis report of a composite grab drilling mud sample taken from OCD Cell #21 at the Gandy Marley Landfarm located in Chaves County, New Mexico. The sample was taken on June 8, 2005 at 09:00 hour by Clayton M. Barnhill, PG, of CMB Environmental & Geological Services, Inc. The purpose of the sample was to gain chemical characterization and analysis of the oil well drilling muds being deposited in OCD Cell # 21 at the Gandy-Marley Landfarm. The drilling muds are generated from oil well drilling activities in Northern Lea and Chaves counties, New Mexico. The sample was a composite grab sample of the oil well drilling mud being deposited in Cell # 21 and taken at several points from these muds in the cell. The drilling mud samples were rolled and blended in a clean 5 gallon bucket, then a grab sample of the composite drilling mud from the bucket was placed in a clean stainless steel bowl, blended again, and then placed in two 4 ounce glass jars with no preservative. Nitrile gloves were worn at all times by Clayton M. Barnhill during the sampling event to prevent any cross contamination. The sample was immediately cooled to 4° Celsius, and shipped to Trace Analysis Laboratory located in Lubbock, Texas for chemical analysis. The chemical analysis included BTEX, TPH DRO, TPH GRO, Hydroxide Alkalinity, Carbonate Alkalinity, Bicarbonate Alkalinity, Total Alkalinity, Chloride, Specific Conductance, pH, Total Calcium, Total Magnesium, Total Potassium, Total, Sodium, Sulfate, and TCLP Metals.

Lab Analysis concentrations in the drilling mud sample were 10,200 PPM Chloride, TPH DRO 512 PPM, TPH GRO 17.7 PPM, and Xylene 0.0497 PPM. All drilling mud sample chemical concentrations were below RCRA 40 CFR 268.48 universal treatment standards. Oil well drilling mud is an exempt waste.

Analysis results can be viewed in the attached laboratory analysis report.

If you have any questions please do not hesitate to call me at (505) 626-1615. Thank you.

Sincerely.

Clayton M. Barnhill, PG

Page Number: 1 of 5 Gandy Marley Landfarm

## **Summary Report**

Gandy Marley Inc.

Report Date: June 13, 2005

Box 1658

Roswell, NM 88202

Work Order: 5060817

Project Location: Gandy Marley Landfarm

Project Name:

Quarterly Sampling (NM-711-1-0020)

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
64664	OCD Cell #21	soil	2005-06-07	09:00	2005-06-08
64665	OCD Cell #5	soil	2005-06-07	10:30	2005-06-08
64666	OCD Cell #6	soil	2005-06-07	11:05	2005-06-08
64667	OCD Cell #7	soil	2005-06-07	11:35	2005-06-08
64668	OCD Cell #15	soil	2005-06-07	12:10	2005-06-08
64669	OCD Cell #16	soil	2005-06-07	12:20	2005-06-08
64670	OCD Cell #17	soil	2005-06-07	12:30	2005-06-08
64671	OCD Cell #18	soil	2005-06-07	13:40	2005-06-08

	,	BTEX			MTBE	TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
64664 - OCD Cell #21	< 0.0100	< 0.0100	< 0.0100	0.0497		512	17.7
64665 - OCD Cell #5	< 0.0100	< 0.0100	< 0.0100	< 0.0100	ľ	84.8	<1.00
64666 - OCD Cell #6	< 0.0100	< 0.0100	< 0.0100	< 0.0100		< 50.0	<1.00
64667 - OCD Cell #7	< 0.0100	< 0.0100	< 0.0100	< 0.0100		< 50.0	<1.00
64668 - OCD Cell #15	< 0.0100	< 0.0100	< 0.0100	< 0.0100	l	< 50.0	<1.00
64669 - OCD Cell #16	< 0.0100	< 0.0100	< 0.0100	< 0.0100		< 50.0	< 1.00
64670 - OCD Cell #17	< 0.0100	< 0.0100	< 0.0100	< 0.0100	İ	< 50.0	<1.00
64671 - OCD Cell #18	< 0.0100	< 0.0100	< 0.0100	< 0.0100		< 50.0	<1.00

Sample: 64664 - OCD Cell #21

Param	Flag	Result	Units	$\mathbf{RL}$
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		< 1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		62.0	mg/Kg as CaCo3	4.00
Total Alkalinity		$\boldsymbol{62.0}$	mg/Kg as CaCo3	4.00
Chloride		10200	mg/Kg	1.00
Specific Conductance		22300	$\mu MHOS/cm$	0.00
pH		7.91	s.u.	0.00
Total Calcium		138000	mg/Kg	50.0
Total Magnesium		5490	mg/Kg	50.0
Total Potassium		3100	mg/Kg	50.0
Total Sodium		8450	mg/Kg	50.0
Sulfate		2600	mg/Kg	2.00
TCLP Silver		< 0.125	mg/L	0.125

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Work Order: 5060817 Quarterly Sampling (NM-711-1-0020) Page Number: 2 of 5 Gandy Marley Landfarm

#### sample 64664 continued ...

Param	$\mathbf{Flag}$	Result	Units	RL
TCLP Arsenic	<u>~</u>	< 0.100	mg/L	0.100
TCLP Barium		1.71	m mg/L	0.100
TCLP Cadmium		< 0.0500	m mg/L	0.0500
TCLP Chromium		0.135	mg/L	0.100
TCLP Mercury		< 0.0100	m mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

#### Sample: 64665 - OCD Cell #5

Param	Flag	Result	Units	$\mathbf{RL}$
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		64.0	mg/Kg as CaCo3	4.00
Total Alkalinity		64.0	mg/Kg as CaCo3	4.00
Chloride		10.0	mg/Kg	1.00
Specific Conductance		333	$\mu \mathrm{MHOS/cm}$	0.00
pН		8.30	s.u.	0.00
Total Calcium		73200	mg/Kg	50.0
Total Magnesium		2130	mg/Kg	50.0
Total Potassium		1450	mg/Kg	50.0
Total Sodium		121	mg/Kg	50.0
Sulfate	•	89.4	mg/Kg	2.00
TCLP Silver		< 0.125	m mg/L	0.125
TCLP Arsenic		< 0.100	mg/L	0.100
TCLP Barium		2.30	m mg/L	0.100
TCLP Cadmium		< 0.0500	$_{ m mg/L}$	0.0500
TCLP Chromium		0.116	m mg/L	0.100
TCLP Mercury		< 0.0100	m mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

#### Sample: 64666 - OCD Cell #6

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		74.0	mg/Kg as CaCo3	4.00
Total Alkalinity		74.0	mg/Kg as CaCo3	4.00
Chloride		96.2	mg/Kg	1.00
Specific Conductance		1340	$\mu \mathrm{MHOS/cm}$	0.00
pН		8.10	s.u.	0.00
Total Calcium		74100	mg/Kg	50.0
Total Magnesium		3270	mg/Kg	50.0
Total Potassium		2020	mg/Kg	50.0
Total Sodium		591	mg/Kg	50.0
Sulfate		51.2	mg/Kg	2.00
TCLP Silver		< 0.125	$_{ m mg/L}$	0.125
TCLP Arsenic		< 0.100	$_{ m mg/L}$	0.100
TCLP Barium		2.50	mg/L	0.100

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Work Order: 5060817 Quarterly Sampling (NM-711-1-0020) Page Number: 3 of 5 Gandy Marley Landfarm

sample 64666 continued ...

Param	$\mathbf{Flag}$	Result	Units	RL
TCLP Cadmium		< 0.0500	mg/L	0.0500
TCLP Chromium		< 0.100	$_{ m mg/L}$	0.100
TCLP Mercury		< 0.0100	mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

### Sample: 64667 - OCD Cell #7

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		20.0	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		5710	mg/Kg as CaCo3	4.00
Total Alkalinity		5730	mg/Kg as CaCo3	4.00
Chloride		9.11	mg/Kg	1.00
Specific Conductance		280	$\mu \mathrm{MHOS/cm}$	0.00
рĤ		8.82	s.u.	0.00
Total Calcium		53900	mg/Kg	50.0
Total Magnesium		2040	mg/Kg	50.0
Total Potassium		1170	mg/Kg	50.0
Total Sodium		237	mg/Kg	50.0
Sulfate		46.3	mg/Kg	2.00
TCLP Silver		< 0.125	mg/L	0.125
TCLP Arsenic		< 0.100	mg/L	0.100
TCLP Barium		2.56	mg/L	0.100
TCLP Cadmium		< 0.0500	mg/L	0.0500
TCLP Chromium		0.118	mg/L	0.100
TCLP Mercury		< 0.0100	mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

#### Sample: 64668 - OCD Cell #15

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		< 1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		$\boldsymbol{62.0}$	mg/Kg as CaCo3	4.00
Total Alkalinity		62.0	mg/Kg as CaCo3	4.00
Chloride		49.8	mg/Kg	1.00
Specific Conductance		549	$\mu { m MHOS/cm}$	0.00
pН		8.21	s.u.	0.00
Total Calcium		29100	mg/Kg	50.0
Total Magnesium		3460	mg/Kg	50.0
Total Potassium		2320	mg/Kg	50.0
Total Sodium		142	mg/Kg	50.0
Sulfate		99.0	mg/Kg	2.00
TCLP Silver		< 0.125	m mg/L	0.125
TCLP Arsenic		< 0.100	mg/L	0.100
TCLP Barium		1.79	mg/L	0.100
TCLP Cadmium		< 0.0500	mg/L	0.0500
TCLP Chromium		0.126	mg/L	0.100

Work Order: 5060817 Quarterly Sampling (NM-711-1-0020) Page Number: 4 of 5 Gandy Marley Landfarm

 $sample\ 64668\ continued\ \dots$ 

Param	Flag	Result	Units	RL
TCLP Mercury		< 0.0100	mg/L	0.0100
TCLP Lead		< 0.100	m mg/L	0.100
TCLP Selenium		< 0.500	m mg/L	0.500_

### Sample: 64669 - OCD Cell #16

Param	Flag	Result	Units	m RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		< 1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		98.0	mg/Kg as CaCo3	4.00
Total Alkalinity		98.0	mg/Kg as CaCo3	4.00
Chloride		1560	mg/Kg	1.00
Specific Conductance		4450	$\mu \mathrm{MHOS/cm}$	0.00
рH		8.28	s.u.	0.00
Total Calcium		53400	mg/Kg	50.0
Total Magnesium		2650	$_{ m mg/Kg}$	50.0
Total Potassium		1380	mg/Kg	50.0
Total Sodium	*	2280	mg/Kg	50.0
Sulfate		596	mg/Kg	2.00
TCLP Silver		< 0.125	m mg/L	0.125
TCLP Arsenic		< 0.100	m mg/L	0.100
TCLP Barium		2.10	m mg/L	0.100
TCLP Cadmium		< 0.0500	m mg/L	0.0500
TCLP Chromium		$\boldsymbol{0.120}$	m mg/L	0.100
TCLP Mercury		< 0.0100	m mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

#### Sample: 64670 - OCD Cell #17

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		44.0	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		<b>32</b> 0	mg/Kg as CaCo3	4.00
Total Alkalinity		364	mg/Kg as CaCo3	4.00
Chloride		159	mg/Kg	1.00
Specific Conductance		1830	$\mu \mathrm{MHOS/cm}$	0.00
рĦ		$\boldsymbol{9.05}$	s.u.	0.00
Total Calcium		340	mg/Kg	50.0
Total Magnesium		1110	mg/Kg	50.0
Total Potassium		1190	mg/Kg	50.0
Total Sodium		1470	mg/Kg	50.0
Sulfate		46.4	mg/Kg	2.00
TCLP Silver		< 0.125	m mg/L	0.125
TCLP Arsenic		< 0.100	mg/L	0.100
TCLP Barium		1.80	mg/L	0.100
TCLP Cadmium		< 0.0500	mg/L	0.0500
TCLP Chromium		< 0.100	m mg/L	0.100
TCLP Mercury		< 0.0100	m mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100

Work Order: 5060817 Quarterly Sampling (NM-711-1-0020) Page Number: 5 of 5 Gandy Marley Landfarm

sample 64670 continued ...

Param	$\mathbf{Flag}$	Result	Units	RL
TCLP Selenium		< 0.500	mg/L	0.500

#### Sample: 64671 - OCD Cell #18

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/Kg as CaCo3	1.00
Carbonate Alkalinity		< 1.00	mg/Kg as CaCo3	1.00
Bicarbonate Alkalinity		42.0	mg/Kg as CaCo3	4.00
Total Alkalinity		42.0	mg/Kg as CaCo3	4.00
Chloride		122	mg/Kg	1.00
Specific Conductance		$\boldsymbol{1240}$	$\mu \mathrm{MHOS/cm}$	0.00
pH		8.38	s.u.	0.00
Total Calcium		83000	mg/Kg	50.0
Total Magnesium		3020	mg/Kg	50.0
Total Potassium		831	mg/Kg	50.0
Total Sodium		370	mg/Kg	50.0
TCLP Silver		< 0.125	m mg/L	0.125
TCLP Arsenic		< 0.100	m mg/L	0.100
TCLP Barium		1.76	mg/L	0.100
TCLP Cadmium		< 0.0500	mg/L	0.0500
TCLP Chromium	•	0.116	mg/L	0.100
TCLP Mercury		< 0.0100	mg/L	0.0100
TCLP Lead		< 0.100	mg/L	0.100
TCLP Selenium		< 0.500	mg/L	0.500

# ATTACHMENT B

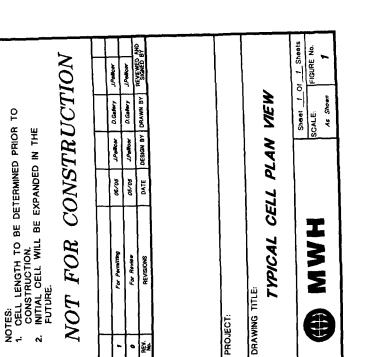
Table 1.2

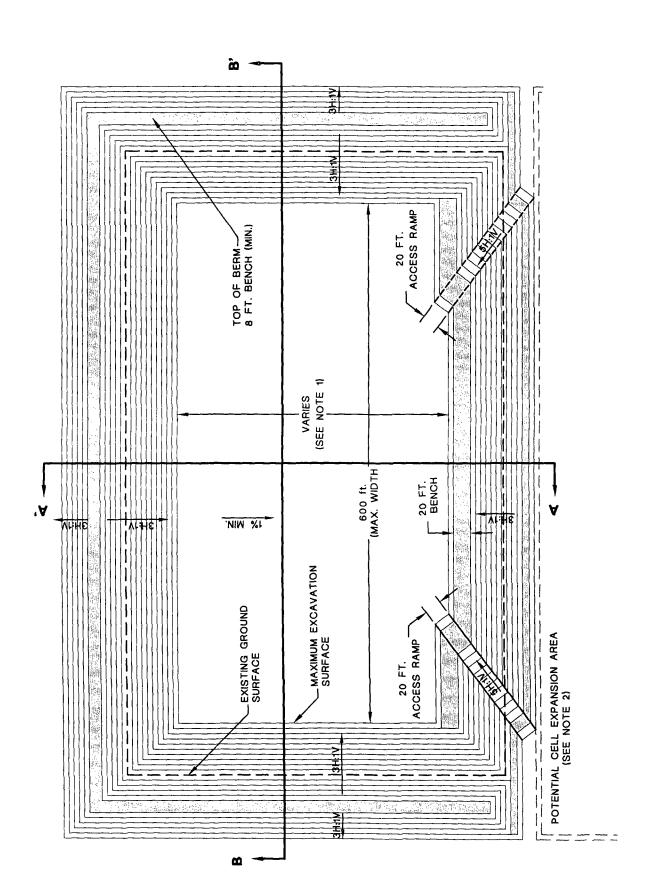
Contaminants	* WQCC Human Health Standards	** Pollutant Concentrations in Treatment & Completion Fluids
	0.1 mg/l	166.0 mg/l
(1) Arsenic (As)	0.1 mg/l 1.0 mg/l	498.1 mg/l
(2) Barium (Ba)	.0.01 mg/l	26.1 mg/l
(3) Cadmium (Cd)	0.05 mg/l	616.8 mg/l
(4) Chromium (Cr)	0.2 mg/l	52.0 mg/l
(5) Cyanide (CN)	1.6 mg/l	62.0 mg/l
(6) Fluoride (F)	0.05 mg/l	1376.0 mg/l
(7) Lead (Pb)	0.002 mg/l	_
(8) Total Mercury (Hg)	10.0 mg/l	
(9) Nitrate (NO, as N)	<u> </u>	42.9 mg/l
(10) Selenium (Se)	0.05 mg/l	1.6 mg/l
(11) Silver (Ag)	0.05 mg/l	1,0 mg/1
(12) Honging (II)	0.03 mg/l	
(12) Grammin (0) (13) Radioactivity: Combined Radium-226 & Radium-228	30 pCi/l	1341.0 mg/l
(14) Benzene	0.01 mg/l	1341.0 Hg/1
(15) Polychlorinated biphenyls (PCB's)	0.001 mg/l	891.0 mg/l
(16) Toluene	0.75 mg/l	691.0 mg/1
(17) Carbon Tetrachloride	0.01 mg/l	
(18) 1,2-dichloroethane (EDC)	0.01 mg/l	
(19) 1.1-dichloroethylene (1,1-DCE)	0.005 mg/l	
(20) 1.1.2.2-tetrachloroethylene (PCE)	0.02 mg/l	
(21) 1,1,2-trichloroethylene (TCE)	0.10 mg/l	1149.0 mg/l
(22) ethylbenzene	0.75 mg/l	2675.0 mg/I
(23) total xylenes	0.62 mg/l	29.0 mg/l
(24) methylene chloride	0.1 mg/l	23.0 mg/1
(25) chloroform	0.1 mg/l	
(26) 1.1-dichloroethane	0.025 mg/l	
(27) ethylene dibromide (EDB)	0.0001 mg/l	
(28) 1,1,1-trichloroethane	0.06 mg/l	
(29) 1,1,2-trichloroethane	0.01 mg/l	
(30) 1,1,2,2-tetrachloroethane	0.01 mg/l	
(31) vinyl chloride	0.001 mg/l	
(32) PAHs: total naphthalene plus monomethylnaphthalenes	0.03 mg/l	
(33) benzo-a-pyrene	0.0007 mg/1	
(1) Chloride (Cl)	250.0 mg/l	277.2 mg/l
(2) Copper (Cu)	1.0 mg/l	384,412.0 mg/k
(3) Iron (Fe)	1.0 mg/l	5146.0 mg/l
(4) Manganese (Mn)	0.2 mg/l	263.0 mg/l
(6) Phenols	0.005 mg/l	203.0 mg/1
(7) Sulfate (SO <sub>2</sub> )	600.0 mg/l	
(8) Total Dissolved Solids (TDS)	1000.0 mg/l	520,375.0 mg/l
(9) Zinc (Zn)	10.0 mg/l	362.9 mg/l
(3) Ame (An)	-	

Sources:

<sup>\*</sup> NMAC 20.6.2.1 - Ground and Surface Water Protection

<sup>\*\*</sup> EPA - Profile of the Oil and Gas Extraction Industry





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