



TETRA TECH

January 19, 2009

Mr. Mike Bratcher
NMOCD District II
1301 W. Grand Avenue
Artesia, New Mexico 88210

Re: Additional Information for Pit Closure Procedure on the Unit Corporation, Gourley Federal #3 Well, Unit H, Section 28, T-22-S, R-28-E, Eddy County, New Mexico

Mr. Bratcher;

The following is being submitted as supplemental information for the reserve pit closure at the above mentioned wellsite. At the request of Unit Corporation, Tetra Tech, Inc. was contracted to perform sampling of an open reserve pit located in Eddy County, New Mexico. This pit was originally sampled for closure in June, 2007. The additional sampling was performed in January, 2009.

January 2009 Confirmation Sampling – As requested, additional samples were taken from the center and the southwest corner of the pit. Samples from the 25' depth were analyzed for BTEX, chlorides, and Total Petroleum Hydrocarbons (TPH). Confirmation samples were also collected for chlorides at 39' in the center and 35' in the southwest corner. During the confirmation sampling, the soils were also field screened for chlorides. Please see the attached Pit Closure Sampling Report for details. A 1' to 2' thick, red clay layer was encounter in both sample trenches. The clay was found at 37' in the center and 34' in the southwest corner.

Sample Results – A table showing the sample results from both the 2007 and 2009 sampling events as well as the field screening results are attached.

Southwest Corner

The field screening of the southwest corner shows chloride concentrations ranging from 5,800 mg/kg at the bottom of the pit, declining to 700 mg/kg at 30', and then increasing to 6,450 mg/kg at the clay layer. Below the clay layer at 35' the chloride concentration is 750 mg/kg. The laboratory results for the 35' sample shows a concentration of 761 mg/kg chlorides.

Center

The field screening of the center shows chloride concentrations ranging from 13,520 mg/kg at the bottom of the pit and 19,600 at 15' declining to 1050 mg/kg at 35'. The chloride concentration increased to 9,450 mg/kg at the clay layer. Below the clay layer at 39', the chloride concentration is 1600 mg/kg. The laboratory results for the 39' sample shows a concentration of 2,170 mg/kg chlorides.

Hydrogeology

According to the Geology and Groundwater Resources of Eddy County, New Mexico (Report 3), the Rustler and Castile formation (Ochoa Series) is present west and east of the Pecos River.

2/3/09 Talked w/
Gary Miller re data
shows this could be
possible GW Impact
He will get w/ skip w/ unit
& discuss options



TETRA TECH

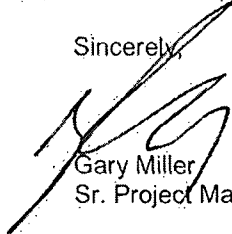
The Salado formation overlies the Castile formation east of the Pecos River and was removed by solution west of the river. The Rustler formation consists of anhydrite, gypsum, interbedded sandy clay and beds of dolomite, and unconformably overlies the Salado Formation east of the Pecos River. The Salado formation consists of anhydrite, polyhalite and red sandy shale. Groundwater from the Rustler formation east of the Pecos River, is historically high in chloride and sulfate concentrations. In June, 2006 your office requested a temporary monitor well be drilled at this site. The well was drilled to a depth of 50'. The clay layer, seen in both of the test trenches noted above was found at a depth of 30'. The well was allowed to stand open for 24 hours and the water level was found to be at 45' below ground surface. The well was bailed dry and allowed to recover. The well was then sampled and the water analyzed at TraceAnalysis, Inc. and was found to have chlorides of 907 mg/L and Total Dissolved Solids (TDS) of 3990 mg/kg.

Proposed Closure

Considering the water quality in the area, the clay layer encountered at 34' to 37' and the sample results showing decline in the chloride concentrations below the clay layer, it is proposed to cap the pit bottom and leave the material in place. In order to cap the site, the pit bottom would be leveled and the area lined with a layer of sand to bed the entire excavation with a 20 mil plastic liner.

If you require any additional information please call 432-682-4559.

Sincerely,



Gary Miller
Sr. Project Manager

TetraTech Corporation
Pit Closure Sampling Report

Job Number: 115-6403653

Date:

6/25/2007 and 1/7/2009

Client: Unit Production

Well Name: Gourley Federal #3

API#

Depth of Pit

10

Depth to
Groundwater

Orientation of pit North

45' Burial trench location from reserve pit N A

All pit sample depths are below pit bottom (BPB)

Sample Location	Depth (BPB)	Field Chloride Results (mg/Kg)	Lab Chloride and TPH (mg/kg)	Soil to be excavated	Soil to be left in situ
NE Corner (Jun-06)	2'	10,400	DNR		
	5'	200	276		
	10'	200	DNR		
Center (Jun-06)	2'	13,520	DNR		
	5'	9,680	DNR		
	10'	5,440	DNR		
	15'	19,600	DNR		
	20'	6,560	4,720		
Center (Jan-09)	25'	4,048	3980 Chloride, 1.87 GRO		
	30'	8,150	DNR		
	32'	4,100	DNR		
	35'	1,050	DNR		
	(clay layer)	9,450	DNR		
	38'	1,900	DNR		
	39'	1,600	2,170		
SE Corner (Jun-06)	2'	1,300	DNR		
	5'	3,000	DNR		
	10'	4,330	DNR		
	15'	800	DNR		
	20'	620	282		
SW Corner (Jun-06)	2'	5,800	DNR		
	5'	3,400	DNR		
	10'	2,640	DNR		
	15'	2,800	DNR		
	20'	3,200	DNR		
SW Corner (Jan-09)	25'	1,350	1680 chloride, 3.56 GRO		
	30'	700	DNR		
	32'	2,150	DNR		
	(clay layer)	6,450	DNR		
NW Corner (Jun-06)	35'	750	761		
	2'	6,880	DNR		
	5'	200	126		
Background (Jul-06)	3'	120	≤50		

BPB- Below Pit Bottom

Report Date: July 11, 2007
3041

Work Order: 7062927
SWEATT/ Gourley Fed #3

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Eddy County, NM

Summary Report

Gary Miller
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 11, 2007

Work Order: 7062927



Project Location: Eddy County, NM
Project Name: SWEATT/ Gourley Fed #3
Project Number: 3041

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
128876	North East 5'	soil	2007-06-25	00:00	2007-06-29
128877	North West 5'	soil	2007-06-25	00:00	2007-06-29
128878	Center 20'	soil	2007-06-25	00:00	2007-06-29
128879	South East 20'	soil	2007-06-25	00:00	2007-06-29
128880	South West 20'	soil	2007-06-25	00:00	2007-06-29
128881	Background 3'	soil	2007-06-25	00:00	2007-06-29

Sample: 128876 - North East 5'

Param	Flag	Result	Units	RL
Chloride		276	mg/Kg	2.00

Sample: 128877 - North West 5'

Param	Flag	Result	Units	RL
Chloride		126	mg/Kg	2.00

Sample: 128878 - Center 20'

Param	Flag	Result	Units	RL
Chloride		4720	mg/Kg	2.00

Sample: 128879 - South East 20'

Param	Flag	Result	Units	RL
Chloride		282	mg/Kg	2.00

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Sample: 128880 - South West 20'

Param	Flag	Result	Units	RL
Chloride		2300	mg/Kg	2.00

Sample: 128881 - Background 3'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	2.00

Report Date: July 10, 2007
3041

Work Order: 7062926
SWEATT/ Gourley Fed #3

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Eddy County, NM

Summary Report

Gary Miller
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 10, 2007

Work Order: 7062926



Project Location: Eddy County, NM
Project Name: SWEATT/ Gourley Fed #3
Project Number: 3041

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
128875	TMW-1	water	2007-06-29	11:15	2007-06-29

Sample: 128875 - TMW-1

Param	Flag	Result	Units	RL
Chloride		907	mg/L	2.00
Total Dissolved Solids		3990	mg/L	10.00

Report Date: January 12, 2009
3653

Work Order: 9010805
Unit-Gourley Fed. #3

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Eddy Co., NM

Summary Report

Gary Miller
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: January 12, 2009

Work Order: 9010805



Project Location: Eddy Co., NM
Project Name: Unit-Gourley Fed. #3
Project Number: 3653

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
184122	SW 25'	soil	2009-01-07	00:00	2009-01-08
184123	SW 35'	soil	2009-01-07	00:00	2009-01-08
184124	Center 25'	soil	2009-01-07	00:00	2009-01-08
184125	Center 38'	soil	2009-01-07	00:00	2009-01-08

Sample - Field Code	BTEX				TPH 418.1	TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TRPHC (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
184122 - SW 25'	<0.0100	<0.0100	<0.0100	0.0149	<10.0	<50.0	3.56
184124 - Center 25'	<0.0100	<0.0100	<0.0100	<0.0100	<10.0	<50.0	1.87

Sample: 184122 - SW 25'

Param	Flag	Result	Units	RL
Chloride		1680	mg/Kg	4.00

Sample: 184123 - SW 35'

Param	Flag	Result	Units	RL
Chloride		761	mg/Kg	4.00

Sample: 184124 - Center 25'

Param	Flag	Result	Units	RL
Chloride		3980	mg/Kg	4.00

Report Date: January 12, 2009
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Unit-Gourley Fed. #3

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Sample: 184125 - Center 38'

Param	Flag	Result	Units	RL
Chloride		2170	mg/Kg	4.00