Bratcher, Mike, EMNRD

From: Tavarez, Ike [Ike.Tavarez@tetratech.com]
Sent: Wednesday, October 27, 2010 10:26 AM
To: Bratcher, Mike, EMNRD; Terry Gregston (terry_gregston@nm.blm.gov)
Cc: Pat Ellis; Joshua Russo
Subject: COG - Skelly #611 Work Plan Approval Request
Attachments: COG - Skelly #611 Work Plan .pdf

COG Operating
Skelly Unit #611 (well site)
Section 22, T17S, R31E, Unit I
Eddy County, New Mexico
32.81944 103.85217

Mike and Terry,

Please find enclosed the Skelly #611 Work Plan located in Eddy County, New Mexico. Once approved, Tetra Tech will schedule the soil remediation and will notify you before we start. Please let me know if you need additional information or call me if you have any questions, thanks

Ike Tavarez, PG | Senior Project Manager

Main: 432.682.4559 | Fax: 432.682.3946 | Cell: 432.425.3075

Ike.Tavarez@tetratech.com

Tetra Tech | Complex World, Clear Solutions™

1910 North Big Spring | Midland, TX 79705 | www.tetratech.com

TETRA TECH

October 8, 2010

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, New Mexico 88210

Re: Work Plan for the COG Operating LLC., Skelly Unit #611, Unit I, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Skelly Unit #611, Unit I, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81944°, W 103.85217°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on July 20, 2010, and released approximately fifteen (15) barrels of produced fluids from a faulty nipple off the pumping tee. To alleviate the problem, COG personnel replaced the nipple. Thirteen (13) barrels of standing fluids were recovered. The spill initiated from the well's pumping tee and migrated west approximately 120', ranging in width from 35' to approximately 60'. The majority of the spill remained on the caliche pad. The initial C-141 form is enclosed in Appendix A.

Tetra Tech
[illegible]
Tel [illegible] Fax [illegible] www.tetratech.com

Groundwater

No water wells were listed within Section 22. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 300' below surface. The water well data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On August 11, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of three (3) auger holes (AH-1 through AH-3) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. A shallow chloride impact was detected at each of the three auger holes to a depth of 0-1' below surface and significantly declined with depth at 1-1.5' below surface.

Work Plan

In order to remove the chloride impacted soils, COG proposes to excavate the spill's footprint. Based on the limited chloride impact, the spill area will be excavated to a depth of approximately 1.0' below surface. The excavated soil will be transported to proper disposal. Once excavated, the

TETRA TECH

area will be backfilled with clean soil.

If you have any questions or comments concerning the assessment activities planned at the site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Project Manager

cc: Pat Ellis – COG
cc: Terry Gregston – BLM

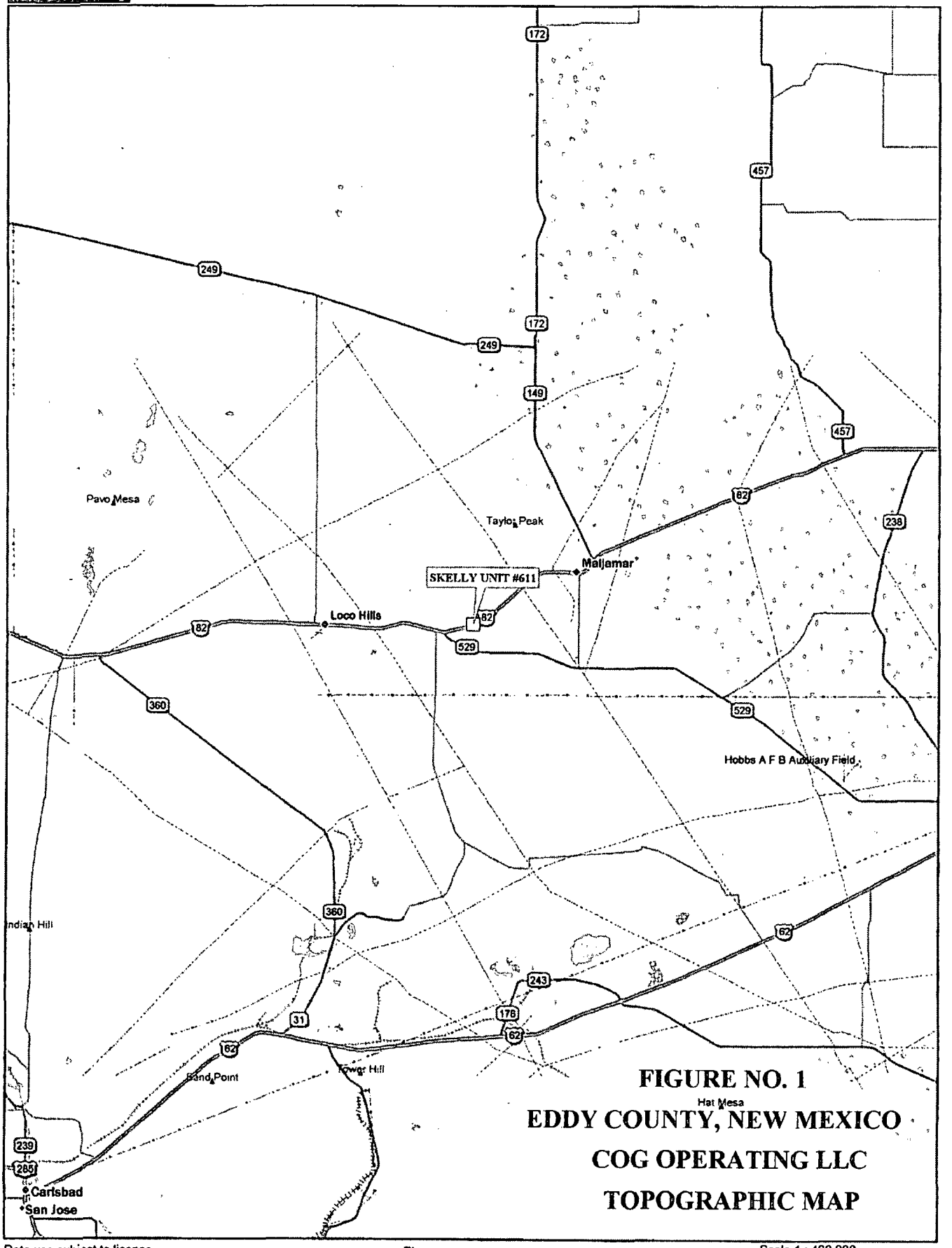

FIGURE NO. 1

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

TN
MN (7.8°E)

Scale 1 : 400,000
1" = 6.31 mi
Data Zoom 9-0

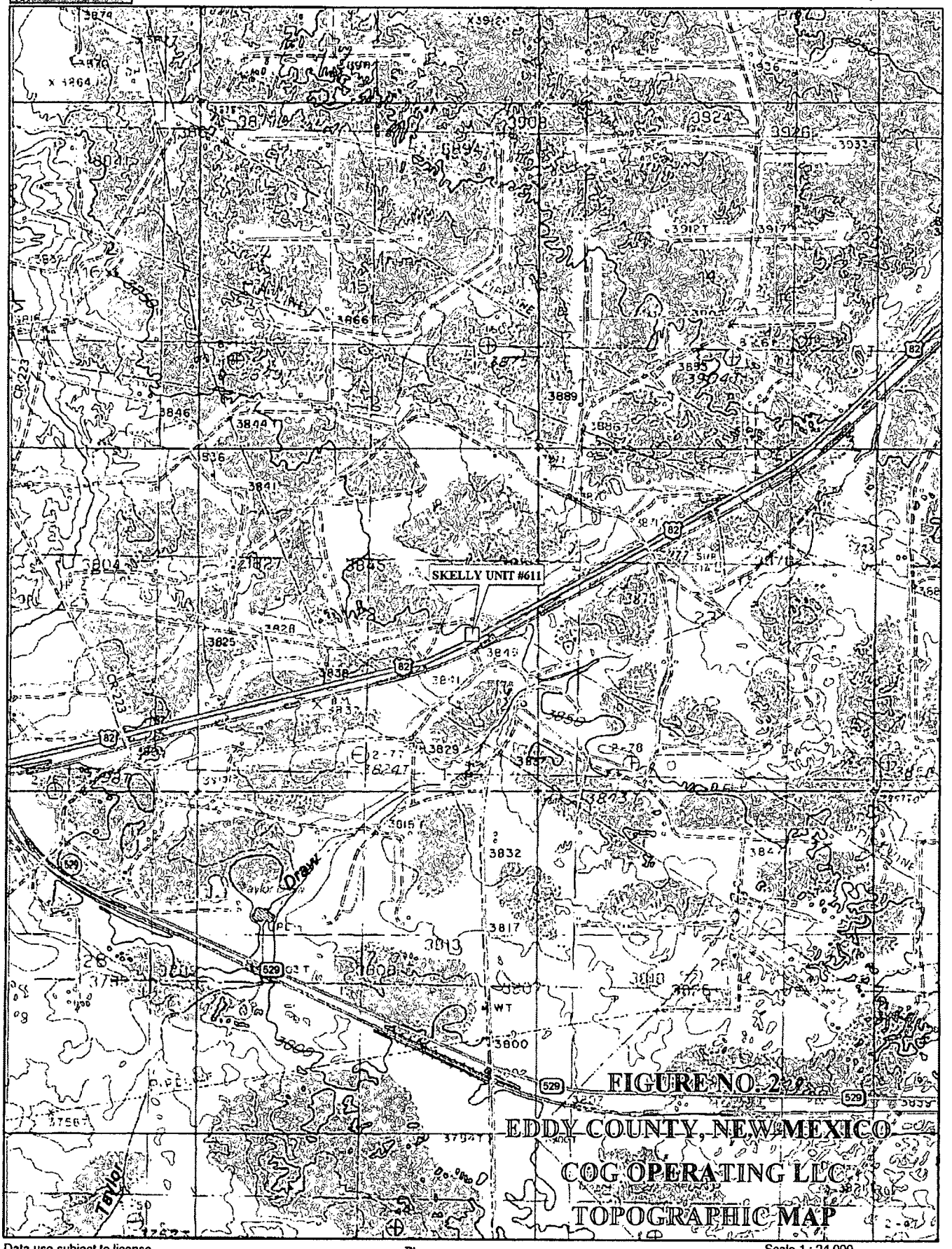

FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

TN

MN (7.8°E)

Scale 1 : 24,000

1" = 2,000.0 ft

Data Zoom 13-0

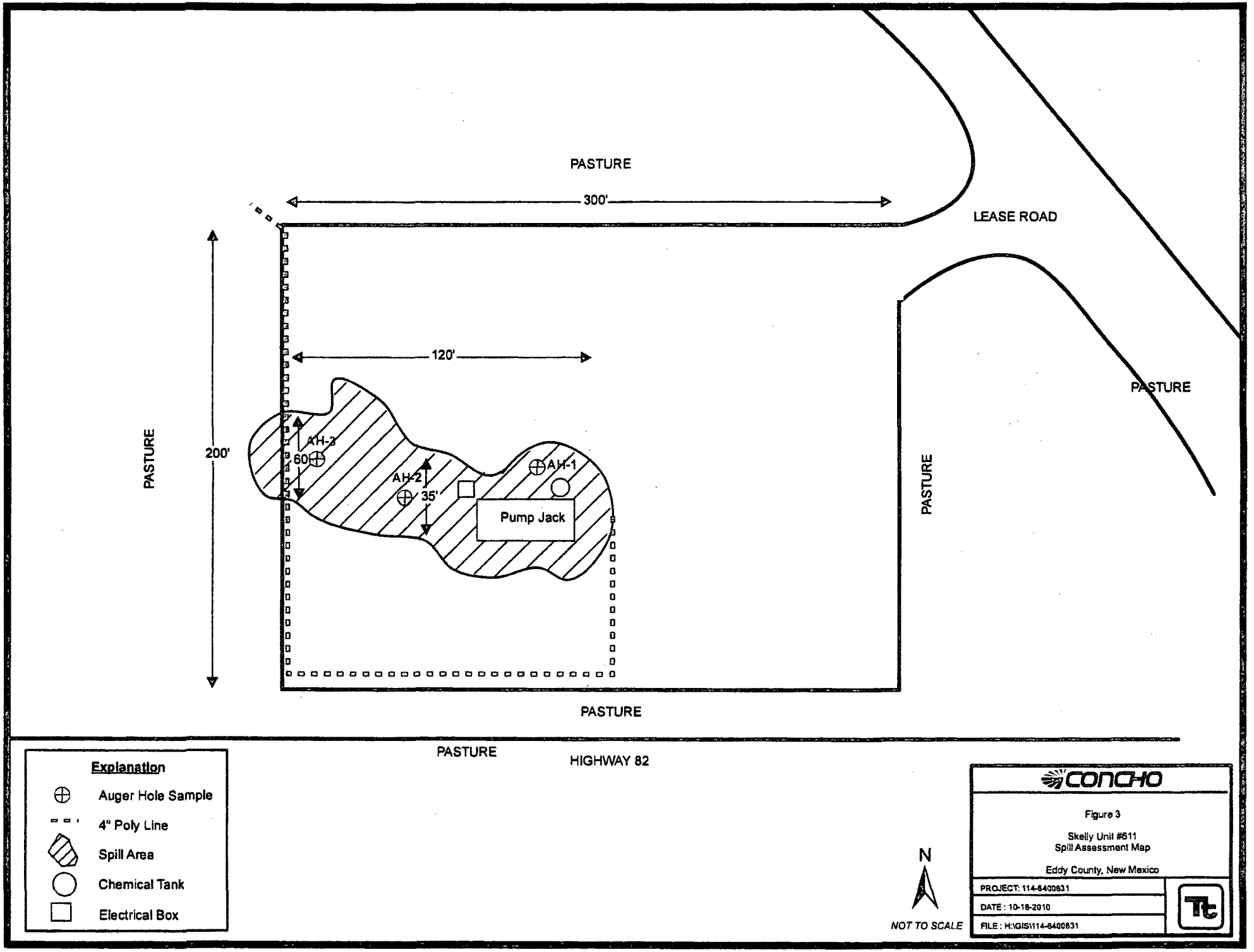
PASTURE
300'
LEASE ROAD
120'
PASTURE
200'
PASTURE
AH-3
60'
AH-2
35'
AH-1
Pump Jack
PASTURE
PASTURE
PASTURE
HIGHWAY 82
Explanation
Auger Hole Sample
4" Poly Line
Spill Area
Chemical Tank
Electrical Box
N
NOT TO SCALE
CONCHO
Figure 3
Skelly Unit #611
Spill Assessment Map
Eddy County, New Mexico
PROJECT: 114-6400831
DATE : 10-18-2010
FILE : H:\GIS\114-6400831

Table 1
COG Operating LLC.
SKELLY UNIT #611
EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-1	8/11/2010	0-1'		X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	5590
	"	1-1.5'		X		-	-	-	-	-	-	-	297
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	208
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
AH-2	8/11/2010	0-1'		X		6.92	156	162.92	<0.0200	<0.0200	<0.0200	<0.0200	8,160
	"	1-1.5'		X		-	-	-	-	-	-	-	251
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	236
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
	"	5-5.5'		X		-	-	-	-	-	-	-	220
AH-3	8/11/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	6,630
	"	1-1.5'		X		-	-	-	-	-	-	-	487
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	230

BEB Below Excavation Bottom
(--) Not Analyzed
Proposed Excavation Depths

6W-325

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Skelly Unit #611	Facility Type	Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-36887

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	22	17S	31E	2380	SOUTH	990	EAST	Eddy

Latitude 32 49.165 Longitude 103 51.129

NATURE OF RELEASE

Type of Release Produced Fluid	Volume of Release 15bbls	Volume Recovered 13bbls
Source of Release Wellhead	Date and Hour of Occurrence 07/20/2010	Date and Hour of Discovery 07/20/2010 5:00 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

There was a small hole in the 1x4 inch nipple coming off of the pumping tee. The defective nipple has been replaced with a new stainless steel nipple.

Describe Area Affected and Cleanup Action Taken.*

Initially the small pinhole in the 1x4 inch nipple released 15bbls of produced fluid around the well. All fluid stayed on the pad location and we were able to recover 13bbls with a vacuum truck. The dimensions of the spill area were 20 yards x 30 yards. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Josh Russo	Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 08/01/2010 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

Water Well Data
Average Depth to Groundwater (ft)
COG - Skelly Unit #611
Eddy County, New Mexico

16 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 288
18	17	16	15	14	13 113
19	20	21	22	23	24
30	29	28	27	26	25
31 290	32	33	34	35	36

16 South 32 East

6	5	4	3 65	2 265	1 265
7	8	9	10	11	12 215
18	17	16 221	15	14	13 215
19 220	20	21 210	22	23 210	24
30	29	28	27	26 243	25
31	32	33	34	35	36 260

17 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

17 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 271	35	36

17 South 32 East

6	5	4 82	3 175	2 60	1 225
7	8	9	10	11 70 88	12
18	17	16	15	14	13
19	20	21	22	23	24
30 180 dry	29	28	27	26	25
31 Brown	32	33	34	35	36

18 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 400
18	17	16	15	14 317	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 261	36

18 South 32 East

6	5	4 65	3	2	1
7 460 82	8	9	10	11	12
18	17	16 84	15	14	13
19	20 164	21	22 429	23	24
30	29	28	27	26	25
31	32	33	34 117	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: August 24, 2010

Work Order: 10081647

Project Location: Eddy County, NM
Project Name: COG/Skelly Unit #611
Project Number: 114-6400631

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241366	AH-1 0-1'	soil	2010-08-11	00:00	2010-08-13
241367	AH-1 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241368	AH-1 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241369	AH-1 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241370	AH-1 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241371	AH-2 0-1'	soil	2010-08-11	00:00	2010-08-13
241372	AH-2 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241373	AH-2 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241374	AH-2 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241375	AH-3 0-1'	soil	2010-08-11	00:00	2010-08-13
241376	AH-3 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241377	AH-3 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241378	AH-3 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241379	AH-2 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241380	AH-2 5-5.5'	soil	2010-08-11	00:00	2010-08-13
241381	AH-3 4-4.5'	soil	2010-08-11	00:00	2010-08-13

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
241366 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241371 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**156**	**6.92**
241375 - AH-3 0-1'					<50.0	<2.00

Sample: 241366 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**5590**	mg/Kg	4.00

Sample: 241367 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**297**	mg/Kg	4.00

Sample: 241368 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241369 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**208**	mg/Kg	4.00

Sample: 241370 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241371 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**8160**	mg/Kg	4.00

Sample: 241372 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**251**	mg/Kg	4.00

Sample: 241373 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241374 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**236**	mg/Kg	4.00

Sample: 241375 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**6630**	mg/Kg	4.00

Sample: 241376 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**487**	mg/Kg	4.00

Sample: 241377 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241378 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241379 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241380 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**220**	mg/Kg	4.00

Sample: 241381 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**230**	mg/Kg	4.00

WO#: 10081647

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3948

PAGE: 1 OF: 2

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640063
PROJECT NAME: COG/Skelly unit #611 Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241366	8-11-10		S		X	AH-1 0-1	1				X		X	X											X				
367						AH-1 1-1.5																							
368						AH-1 2-2.5																							
369						AH-1 3-3.5																							
370						AH-1 4-4.5																							
~~371~~						~~AH-2 0-1~~							X	X															
372						AH-2 1-1.5																							
373						AH-2 2-2.5																							
374						AH-2 3-3.5																							
375	8-11-10		S		X	AH-3 0-1							X	X															

RELINQUISHED BY: (Signature)	Date: 8-12-10 Time: 15:45	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS:			
CITY: Midland STATE: Tx ZIP:		DATE: 8.13.10	TIME: 15:45
CONTACT: Monte PHONE:			

SAMPLED BY: (Print & Initial) Grant Pope Date: 8-11-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 18.0°C

REMARKS: If total TPH exceeds ~~5000~~ 4000 mg/kg run deeper sample
If BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg Run deeper Sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run @ highest TPH for report

WO #: 10081647

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

PAGE: 2 OF: 2

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez
PROJECT NO.:	**PROJECT NAME:**
114-6400631	COG/Skelly unit #611 Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
241376	8-11-10		S		X	AH-3 1-1.5	1				X	
377	8-11-10		S		X	AH-3 2-2.5	1				X	
378	8-11-10		S		X	AH-3 3-3.5	1				X	
379	"		S		X	AH-2 4-4.5 (Run this)	1				X	
380	"		S		X	AH-2 5-5.5	1				X	
381	"		S		X	AH-3 4-4.5	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH 8015 MOD. TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Cr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC/MS Vol. 8240/8260/624; GC/MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)	Date: 8-13-10 Time: 15:45	RECEIVED BY: (Signature)	Date: Time:
SAMPLED BY: (Print & Initial) Grant Pine	Date: 8-11-10 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace	RECEIVED BY: (Signature)		
ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: Monde PHONE:	DATE: 8-13-10 TIME: 15:45		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 18.0° C	REMARKS: If TBHal TPH exceeds 1000 mg/kg run deeper Sample. If BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg Run deeper Sample.		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run highest TPH & BTEX