

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

**RECEIVED**

Form C-141  
Revised October 10, 2003

JUN 17 2010  
Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

**HOBBSOCD**

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	Southern Union Gas Services	Contact	Rose Slade
Address	1507 W. 15 <sup>th</sup> Monahans, Texas 79756	Telephone No.	432-943-1100 ext. 1116
Facility Name	Jal #3 Glycol Release	Facility Type	Gas Plant

Surface Owner	Southern Union Gas Services	Mineral Owner		Lease No.	
---------------	-----------------------------	---------------	--	-----------	--

**LOCATION OF RELEASE**

30 025 38822

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	33	24S	37E					Lea

Latitude 32° 10' 35.16" North

Longitude 103° 10' 20.67" West

**NATURE OF RELEASE**

Type of Release	Tri-ethylene Glycol	Volume of Release	2 - 3 barrels	Volume Recovered	None
Source of Release	Glycol Released through Flare Stack	Date and Hour of Occurrence	1/26/2010 @ 0300	Date and Hour of Discovery	1/27/2010 @ 0300
Was Immediate Notice Given?	Yes No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

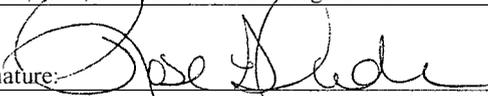
Describe Cause of Problem and Remedial Action Taken:

During glycol "sweeting" activities at the South Plant, a volume of glycol was expelled through the northeast flare stack when a manual valve was opened too quickly. During initial response activities saturated soil was scraped and stockpiled on-site pending transportation to a NMOCD approved landfill.

Describe Area Affected and Cleanup Action Taken.

An approximately 1,000 sq ft area below the flare stack was impacted by liquid glycol, an area of approximately 2,000 sq ft was impacted by airborne glycol. Glycol impacted soil was excavated and stockpiled on location and transported to an NMOCD approved land disposal facility Please reference Jal #3 Glycol Release Remediation Summary and Site Closure Request for additional information

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: 

Printed Name: Rose Slade

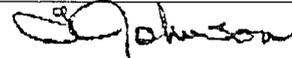
Title: EHS Compliance Specialist

E-mail Address: rose.slade@sug.com

Date: 2/4/10

Phone: 432-940-5147

OIL CONSERVATION DIVISION



Approved by District Supervisor

**ENVIRONMENTAL ENGINEER**

Approval Date: 6-17-10

Expiration Date:

Conditions of Approval:

2503-  
IRP# 2305 6.17.10

PLWJ@1017429695

*Basin Environmental Consulting LLC*

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
Office: (575) 396-2378 Fax: (575) 396-1429  
jwlowry@basin-consulting.com



RECEIVED

JUN 17 2010

HOBBSOCD

**REMEDIATION SUMMARY**

**AND**

**SITE CLOSURE REQUEST**

**Southern Union Gas Services  
Jal #3 Glycol Release  
Lea County, New Mexico  
UNIT E, Section 33, Township 24 South, Range 37 East  
Latitude 32° 10' 35.16" North, Longitude 103° 10' 20.67" West  
NMOCD Reference # 1RP-2305**

Prepared For:

2503 A 6.17.10

Southern Union Gas Services  
1507 West 15<sup>th</sup> Street  
Monahans, Texas 79756

Prepared By:  
Basin Environmental Consulting, LLC

May 2010

Joel W. Lowry

Joel W. Lowry  
Project Manager

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Appendix D – Release Notification and Corrective Action (Form C-141)

## **1.0 INTRODUCTION**

Basin Environmental Consulting, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this Remediation Summary and Site Closure Request for the release site known as Jal #3 Glycol Release. The site is located in Unit Letter E, Section 33, Township 24 South, Range 37 East, in Lea County, New Mexico. The property is owned by Southern Union Gas Services. The site latitude is 32° 10' 35.16" North, and the longitude is 103° 10' 20.67" West. Site Location and Site and Sample Location Maps are provided as Figure 1 and Figure 2, respectively. The Release Notification and Corrective Action (NMOCD Form C-141) indicated two (2) to three (3) barrels of tri-ethylene glycol (glycol) was released from a flare stack, with no recovery. A Material Safety Data Sheet for tri-ethylene glycol is provided as Appendix C. The Release Notification and Corrective Action form is provided as Appendix D.

On January 27, 2010, Southern Union discovered a release from a flare stack at the Southern Union Gas Jal #3 Plant. The release was attributed to manual valve being opened to quickly during glycol sweetening activities. Approximately 2,000 square feet (sq ft) of soil was impacted by airborne glycol and 1000 sq ft was impacted by liquid glycol. During initial response activities, the valve was closed and the saturated soil was excavated and stockpiled on location on top of a 6-mil poly liner, pending final disposition.

## **2.0 NMOCD SITE CLASSIFICATION**

A search of the New Mexico Office of the State Engineer (NMOSE) database indicated depth to groundwater information was unavailable for Section 33, Township 24 South, Range 37 East. A depth to groundwater reference map utilized by the New Mexico Oil Conservation Division (NMOCD) indicates the depth to groundwater is approximately two hundred twenty-five (225) feet bgs. The depth to groundwater in this area results in a score of zero (0) points being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the site, resulting in zero (0) points being assigned to the site as a result of this criteria. There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the Jal #3 Glycol release site has a ranking score of zero (0).

## **3.0 SUMMARY OF FIELD ACTIVITIES**

On February 8, 2010, remedial activities commenced at the location. Visually impacted soil was excavated and stockpiled adjacent to the location on a 6-mil poly liner, pending final disposition. The excavation floor and sidewalls were advanced until visual and olfactory test indicated the glycol impacted soil had been removed. Approximately forty-eight (48) cubic yards (cy) of impacted soil was transported from the location to Sundance Services, Inc (NMOCD Permit # NM-01003) for disposal. The final dimensions of the excavation were approximately twelve (12) feet in width by two hundred (200) feet length and two (2) to eight (8) inches in depth. Site Photographs are provided in Appendix B.

On February 16, 2010, three (3) soil samples (South, Center and North) were collected from the excavation and submitted to the laboratory for analysis of glycol concentrations. The laboratory analytical results indicated glycol concentrations were less than the laboratory method detection limit (MDL) in all the soil samples submitted. A summary of analytical results are provided in Table 1. Laboratory analytical results are provided in Appendix A.

#### **4.0 QA/QC PROCEDURES**

##### **4.1 Soil Sampling**

Soil samples were delivered to Xenco Laboratories, Inc. of Odessa, TX, for tri-ethylene glycol analyses using the method described below. Soil samples were analyzed for tri-ethylene within fourteen days following the collection date.

The soil samples were analyzed as follows:

- **Tri-ethylene glycol** concentrations in accordance with EPA Method 8015 M SW8015G SUB:T104704295-TX

##### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox<sup>®</sup> detergent and rinsed with distilled water.

##### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

#### **5.0 SITE CLOSURE REQUEST**

Based on the analytical results of the confirmation soil samples, Basin recommends Southern Union provide the NMOCD Hobbs District Office a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant site closure to the Jal #3 Glycol Release site.

## 6.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Southern Union Gas Services.

**7.0 DISTRIBUTION:**

Copy 1: Geoffrey Leking  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 1)  
1625 French Drive  
Hobbs, New Mexico 88240

Copy 2: Rose Slade  
Southern Union Gas Services  
1507 West 15<sup>th</sup>  
Monahans, Texas 79756

Copy 3: Joel W. Lowry  
Basin Environmental Service Technology, LLC  
P.O. Box 301  
Lovington, New Mexico 88260  
[jwlowry@basin-consulting.com](mailto:jwlowry@basin-consulting.com)



## Figures

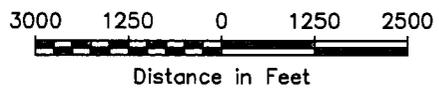
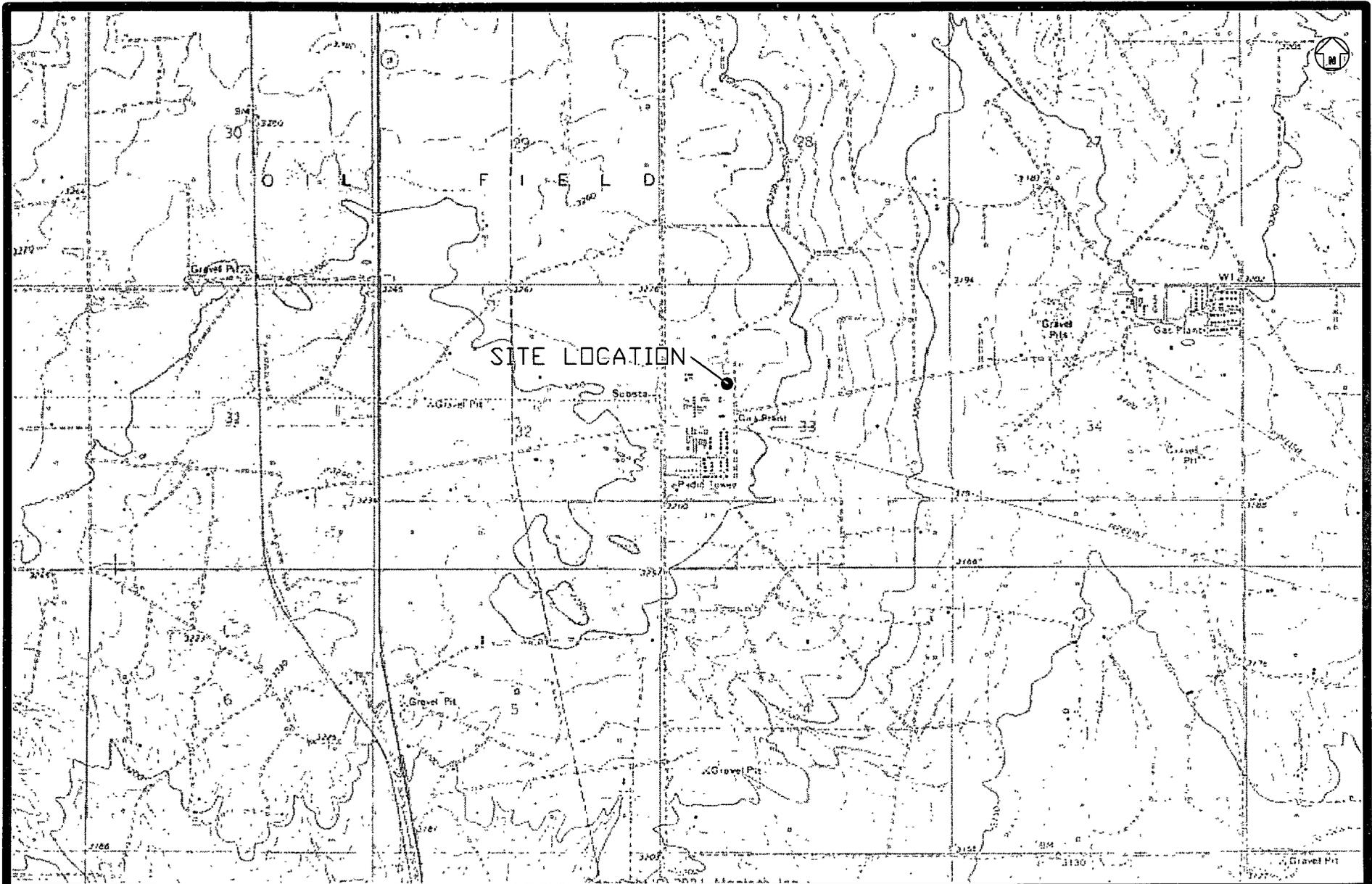
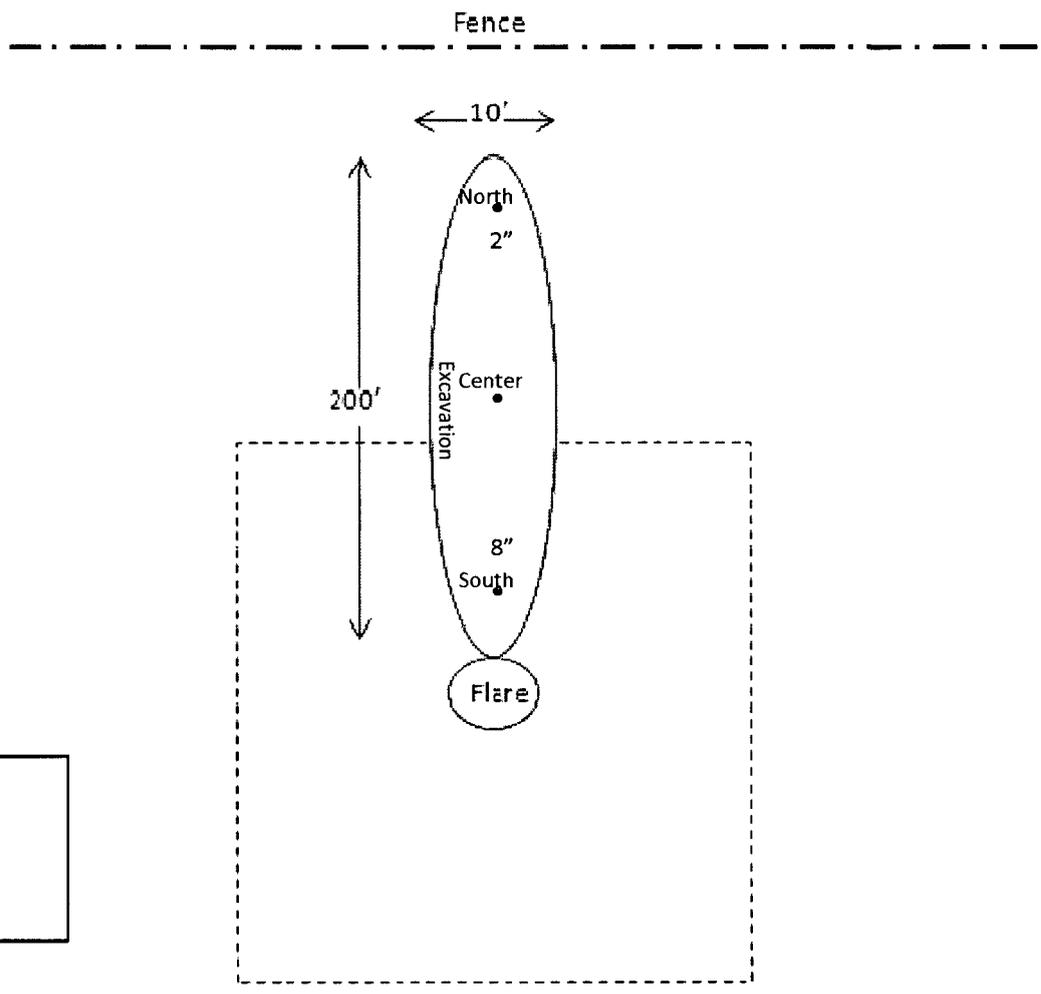


Figure 1  
Site Location Map  
Southern Union Gas Services  
Jal #3 Glycol Release  
Lea County, New Mexico

Basin Environmental Consulting

Prep By: JWL	Checked By: CDS
May 26, 2010	Scale 1"=2,500'

Figure 2  
Jal #3 Glycol Release  
Site and Sample Location Map



Legend:	
•	Sample Location
-----	Pad
- . - . - .	Fence
_____	Excavation

Prepared By Basin Environmental Consulting



# Tables

TABLE 1

CONCENTRATION OF TRIETHYLENE GLYCOL IN SOIL

SOUTHERN UNION GAS SERVICES  
Jal #3 GLYCOL RELEASE  
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHOD: EPA 8015 M SW8015G SUB:T104704295-TX
			Triethylene Glycol (mg/Kg)
South	02/16/10	In-Situ	<10.8
Center	02/16/10	In-Situ	<10.5
North	02/16/10	In-Situ	<10.7



## Appendices



Appendix A  
Laboratory Analytical Reports

# Analytical Report 362482

for

## Basin Environmental Consulting, LLC

**Project Manager: Curt Stanley**

**Jal # 3 Glycol Release**

**Southern Union Gas Services**

**24-FEB-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALII), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



24-FEB-10

Project Manager: **Curt Stanley**  
**Basin Environmental Consulting, LLC**  
P.O. Box 381  
Lovington, NM 88260

Reference: XENCO Report No: **362482**  
**Jal # 3 Glycol Release**  
Project Address: Lea County, NM

**Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 362482. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 362482 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**

Odessa Laboratory Manager

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 362482**



**Basin Environmental Consulting, LLC, Lovington, NM**

Jal # 3 Glycol Release

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
South	S	Feb-16-10 10:00		362482-001
Center	S	Feb-16-10 10:10		362482-002
North	S	Feb-16-10 10:20		362482-003



## CASE NARRATIVE

*Client Name: Basin Environmental Consulting, LLC*  
*Project Name: Jal # 3 Glycol Release*



*Project ID: Southern Union Gas Servi*  
*Work Order Number: 362482*

*Report Date: 24-FEB-10*  
*Date Received: 02/17/2010*

---

**Sample receipt non conformances and Comments:**

None

---

**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

*Batch: LBA-794314 Percent Moisture*  
None

*Batch: LBA-795180 Glycol by EPA 8015 M*  
SW8015G

*Batch 795180, Triethylene Glycol recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.*

*Samples affected are: 362482-002, -001, -003.*

*The Laboratory Control Sample for Triethylene Glycol is within laboratory Control Limits*



# Certificate of Analysis Summary 362482

Basin Environmental Consulting, LLC, Lovington, NM



Project Id: Southern Union Gas Services

Project Name: Jal # 3 Glycol Release

Date Received in Lab: Wed Feb-17-10 08:12 am

Contact: Curt Stanley

Report Date: 24-FEB-10

Project Location: Lea County, NM

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	362482-001	362482-002	362482-003			
	<i>Field Id:</i>	South	Center	North			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Feb-16-10 10:00	Feb-16-10 10:10	Feb-16-10 10:20			
<b>Glycol by EPA 8015 M SUB: T104704295-TX</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Feb-23-10 15:49	Feb-23-10 16:03	Feb-23-10 16:13			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Triethylene Glycol		ND 10.8	ND 10.5	ND 10.7			
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Feb-17-10 17:00	Feb-17-10 17:00	Feb-17-10 17:00			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		7.28 1.00	5.19 1.00	6.79 1.00			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
Brent Barron, II  
Odessa Laboratory Manager



# Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



# Blank Spike Recovery



Project Name: Jal # 3 Glycol Release

Work Order #: 362482

Project ID: Southern Union Gas Services

Lab Batch #: 795180

Sample: 795180-1-BKS

Matrix: Solid

Date Analyzed: 02/23/2010

Date Prepared: 02/23/2010

Analyst: JBU

Reporting Units: mg/kg

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Glycol by EPA 8015 M Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Triethylene Glycol	ND	200	166	83	60-140	

Blank Spike Recovery [D] = 100\*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries



Project Name: Jal # 3 Glycol Release

Work Order #: 362482

Project ID: Southern Union Gas Services

Lab Batch ID: 795180

QC- Sample ID: 362482-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/23/2010

Date Prepared: 02/23/2010

Analyst: JBU

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Glycol by EPA 8015 M  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Triethylene Glycol	ND	216	122	56	216	104	48	15	60-140	30

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
Relative Percent Difference  $RPD = 200 * (C - F) / (C + F)$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



**Project Name:** Jal # 3 Glycol Release

**Work Order #:** 362482

**Lab Batch #:** 794314

**Project ID:** Southern Union Gas Services

**Date Analyzed:** 02/17/2010

**Date Prepared:** 02/17/2010

**Analyst:** WRU

**QC- Sample ID:** 362482-001 D

**Batch #:** 1

**Matrix:** Soil

**Reporting Units:** %

### SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.28	7.35	1	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit



**Environmental Lab of Texas**  
**Variance/ Corrective Action Report- Sample Log-In**

Client: Basin Environmental  
 Date/ Time: 2/17/10 08:12  
 Lab ID #: 362482  
 Initials: AS

**Sample Receipt Checklist**

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	0.1 °C
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#3	Custody Seals intact on shipping container/ cooler? <sup>AS</sup> <sub>2/17/10</sub>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="text" value="Not Present"/>
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="text" value="Not Present"/>
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#6	Sample Instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#17	Sufficient sample amount for Indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="text" value="Not Applicable"/>

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: #19) subcontracted to Xenco-Dallas  
#3) label as seal

<sup>2/17/10</sup> #4  
 Corrective Action Taken: \_\_\_\_\_

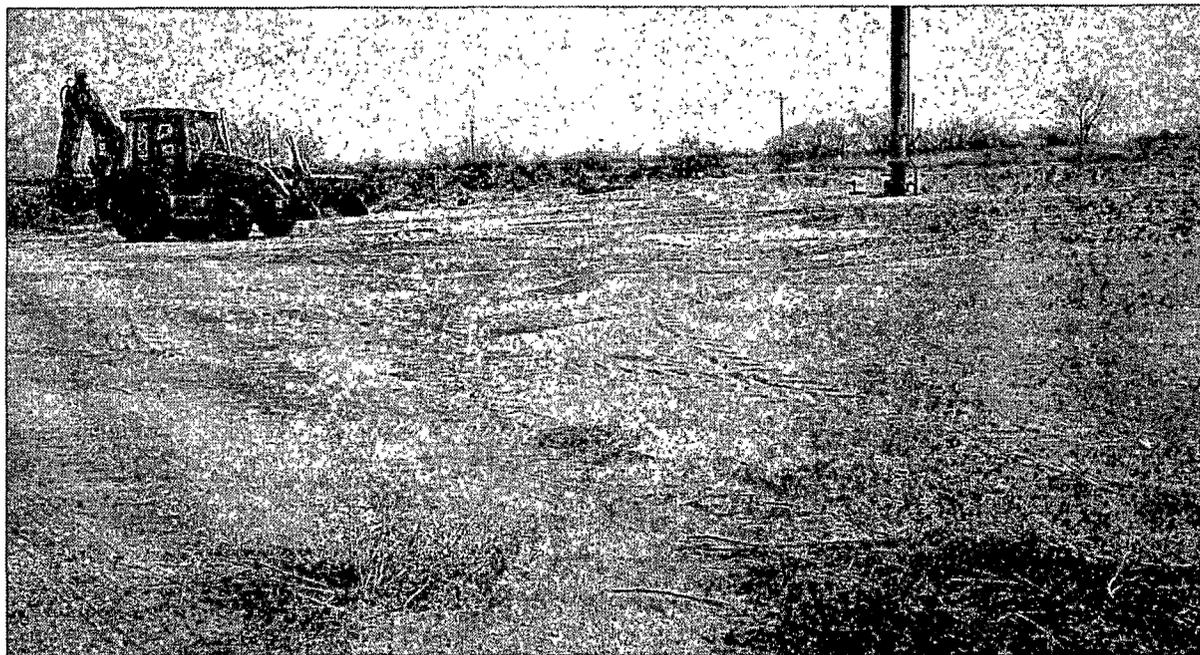
- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event



Appendix B  
Site Photographs



Photograph of Impacted Area (looking north) at the Jal #3 Glycol Release.



Photograph of Completed Remedial Activates (looking northwest) at the Jal #3 Glycol Release.



Appendix C  
Material Safety Data Sheet

MSDS Number: T5382 \* \* \* \* \* Effective Date: 05/17/01 \* \* \* \* \* Supercedes: 06/02/98

**MSDS**

**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtrec: 703-527-3897

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only at the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals

All non-emergency questions should be directed to Customer Service (1-800-552-2537) for assistance.

# TRIETHYLENE GLYCOL

## 1. Product Identification

**Synonyms:** Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-; triglycol; ethylene glycol dihydroxy-diethyl ether

**CAS No.:** 112-27-6

**Molecular Weight:** 150.20

**Chemical Formula:** C6H14O4

**Product Codes:**

J.T. Baker: W660

Mallinckrodt: 2735

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
-----	-----	-----
-----		
Triethylene Glycol	112-27-6	90 - 100%
Yes		

## 3. Hazards Identification

## Emergency Overview

---

**WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.**

**J.T. Baker SAF-T-DATA<sup>(™)</sup> Ratings (Provided here for your convenience)**

---

Health Rating: 0 - None

Flammability Rating: 1 - Slight

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

---

## Potential Health Effects

---

### **Inhalation:**

No adverse health effects expected from inhalation.

### **Ingestion:**

No adverse effects expected.

### **Skin Contact:**

Prolonged exposure may cause skin irritation.

### **Eye Contact:**

Splashing in eye causes irritation with transitory disturbances of corneal epithelium. However, these effects diminish and no permanent injury is expected. Vapors are non-irritating.

### **Chronic Exposure:**

Possible skin irritation.

### **Aggravation of Pre-existing Conditions:**

No information found.

---

## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. Not expected to require first aid measures.

### **Ingestion:**

If large amounts were swallowed, give water to drink and get medical advice.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops..

**Eye Contact:**

If splash occurs, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician.

---

## 5. Fire Fighting Measures

**Fire:**

Flash point: 177C (351F) CC

Autoignition temperature: 371C (700F)

Flammable limits in air % by volume:

lcl: 0.9; ucl: 9.2

Slight fire hazard when exposed to heat or flame.

**Explosion:**

Above the flash point, explosive vapor-air mixtures may be formed.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water or foam may cause frothing.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

---

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from heat, ignition sources and oxidizing agents. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

---

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

Not expected to require any special ventilation.

### **Personal Respirators (NIOSH Approved):**

Not expected to require personal respirator usage.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

---

## 9. Physical and Chemical Properties

### **Appearance:**

Clear, colorless liquid.

### **Odor:**

Odorless.

### **Solubility:**

Miscible in water.

### **Specific Gravity:**

1.1274 @ 15C/4C

### **pH:**

No information found.

### **% Volatiles by volume @ 21C (70F):**

100

### **Boiling Point:**

285C (545F)

### **Melting Point:**

-5C (23F)

**Vapor Density (Air=1):**

5.17

**Vapor Pressure (mm Hg):**

< 0.01 @ 20C (68F)

**Evaporation Rate (BuAc=1):**

0.01

---

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Hygroscopic.

**Hazardous Decomposition Products:**

Carbon dioxide and carbon monoxide may form when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers.

**Conditions to Avoid:**

Heat, flames, ignition sources and incompatibles.

---

## 11. Toxicological Information

Oral rat LD50: 17 gm/kg; investigated as a reproductive effector.

-----\Cancer Lists\-----

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Triethylene Glycol (112-27-6)	No	No	
None			

---

## 12. Ecological Information

**Environmental Fate:**

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade. When released into water, this

material is not expected to evaporate significantly. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

**Environmental Toxicity:**

This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. Transport Information

Not regulated.

### 15. Regulatory Information

```

-----\Chemical Inventory Status - Part 1\-----
-----
Ingredient                                TSCA  EC   Japan
Australia
-----
Triethylene Glycol (112-27-6)            Yes   Yes  Yes
Yes
  
```

```

-----\Chemical Inventory Status - Part 2\-----
-----
Ingredient                                Korea  DSL  NDSL  --Canada--
Phil.
-----
Triethylene Glycol (112-27-6)            Yes   Yes  No
Yes
  
```

```

-----\Federal, State & International Regulations - Part 1\-----
-----
313-----
-SARA 302-      -----SARA
  
```

Ingredient Chemical Catg.	RQ	TPQ	List
----- ----- Triethylene Glycol (112-27-6) No	No	No	No
-----\Federal, State & International Regulations - Part 2\----- -----			
TSCA- Ingredient	CERCLA	261.33	8 (d)
----- ----- Triethylene Glycol (112-27-6)	No	No	No

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: No      Fire: No      Pressure: No  
Reactivity: No      (Pure / Liquid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

**NFPA Ratings:** Health: 1 Flammability: 1 Reactivity: 0

**Label Hazard Warning:**

WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Call a physician.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No changes.

**Disclaimer:**

\*\*\*\*\*  
\*\*\*\*\*

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\*\*\*\*\*  
\*\*\*\*\*

**Prepared by:** Environmental Health & Safety  
Phone Number: (314) 654-1600 (U.S.A.)



Appendix D  
Release Notification and Corrective Action  
(Form C-141)

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	Southern Union Gas Services	Contact	Rose Slade
Address	1507 W. 15 <sup>th</sup> Monahans, Texas 79756	Telephone No	432-943-1100 ext. 1116
Facility Name	Jal #3 Glycol Release	Facility Type	Gas Plant

Surface Owner	Southern Union Gas Services	Mineral Owner		Lease No.	
---------------	-----------------------------	---------------	--	-----------	--

**LOCATION OF RELEASE** API# 30-025-38622-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	33	24S	37E					Lea

Latitude 32° 10' 35.16" North      Longitude 103° 10' 20.67" West

**NATURE OF RELEASE**

Type of Release	Tri-ethylene Glycol	Volume of Release	2 - 3 barrels	Volume Recovered	None
Source of Release	Glycol Released through Flare Stack	Date and Hour of Occurrence	1/26/2010 @ 0300	Date and Hour of Discovery	1/27/2010 @ 0300
Was Immediate Notice Given?	Yes No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

WATER @ 225'

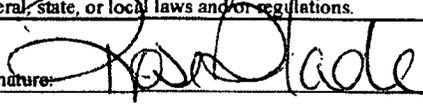
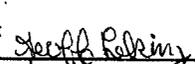
Describe Cause of Problem and Remedial Action Taken:

During glycol "sweetening" activities at the South Plant, a volume of glycol was expelled through the northeast flare stack when a manual valve was opened too quickly. During initial response activities saturated soil was scraped and stockpiled on-site pending transportation to a NMOCD approved landfill.

Describe Area Affected and Cleanup Action Taken.

An approximately 1,000 sq ft area below the flare stack was impacted by liquid glycol, an area of approximately 2,000 sq ft was impacted by airborne glycol. Impacted area will be remediated to applicable NMOCD regulatory levels.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Rose Slade	ENV ENGINEER: Approved by District Supervisor: 	
Title: EHS Compliance Specialist	Approval Date: 05/03/10	Expiration Date: 07/08/10
E-mail Address: rose.slade@sug.com	Conditions of Approval: SUBMIT FINAL C-141 BY 07/06/10	
Date: 2/4/10	Phone: 432-940-5147	IRP-10-5-2503