

HOBBS OCD

JUL 26 2013

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# Remedial Action Plan

## General Site Information:

Magnum Pronto State #4H Tank Battery Crude Oil Release

## Site Contact:

Pat Ellis, COG Operating LLC  
600 West Illinois Avenue, Midland, Texas 79701  
(432) 230-0077

## Depth to Ground Water

Greater than 100 feet below grade surface

425'

## Distance to Nearest Surface Water

Laguna Plata (west-central Lea County), approximately 1.5 miles to the southeast

## Driving Directions

From NM529, south on Lea Co. Rd. 126A 12.5 mi, east on unimproved road 0.65 mi., south 0.35 mi., then southeast 0.25 mi. to tank battery.

## Legal Description

SE ¼ SE ¼ Section 32, T19S, R32E, N.M.P.M., Lea County, New Mexico

July 8, 2013

Terracon Project No. 68137010

## Prepared for:

High Sierra Transportation  
Fort Lupton, Colorado

## Prepared by:

Terracon Consultants, Inc.  
Las Cruces, New Mexico

approved

*Steffrey Sekim*  
Environmental Specialist

NMOC-DIST 1

8/9/13

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# Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

IRP-4068

4068

July 8, 2013



High Sierra Transportation  
6075 CR 19  
Fort Lupton, Colorado 80621

Attn: Larry Cash, Safety  
P: 303-396-9964  
E: [lcash@highsierraenergy.com](mailto:lcash@highsierraenergy.com)

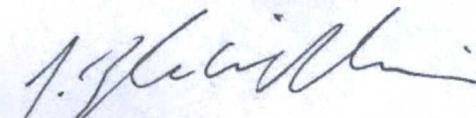
RE: **Remedial Action Plan**  
Magnum Pronto State #4H Tank Battery Crude Oil Release  
SE ¼ SE ¼ Section 32, Township 19 South, Range 32 East, N.M.P.M.  
Lea County, New Mexico  
Terracon Project No. 68137010

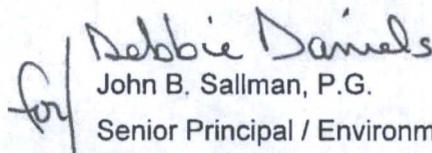
Dear Mr. Cash;

Terracon Consultants, Inc. (Terracon) is pleased to submit our Remedial Action Plan (RAP) for the site referenced above. The RAP was developed in accordance with the New Mexico Oil Conservation Division (OCD) regulations concerning clean-up actions required for releases of crude oil. The RAP presents a description of the release incident and OCD notification, site characteristics, potential receptors, and remedial actions required for the site. Terracon developed the RAP in general accordance with our proposal (P6813-113E) dated May 6, 2013 and your notice to proceed dated May 13, 2013.

Terracon appreciates this opportunity to provide environmental services to High Sierra Transportation. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,  
**Terracon Consultants, Inc.**

  
J. Kyle Williams  
Project Manager

  
John B. Sallman, P.G.  
Senior Principal / Environmental Services  
(Olathe, Kansas)



Terracon Consultants, Inc. 1640 Hickory Loop Suite 105 Las Cruces, New Mexico 88005  
P (575) 527 1700 F (575) 527 1092 [terracon.com](http://terracon.com)

**TABLE OF CONTENTS**

**1.0 SITE DESCRIPTION ..... 1**

**2.0 SCOPE OF SERVICES ..... 1**

    2.1 Standard of Care..... 1

    2.2 Additional Scope Limitations ..... 1

    2.3 Reliance..... 2

**3.0 INTRODUCTION AND NOTIFICATION ..... 2**

**4.0 INITIAL RESPONSE ACTIONS ..... 3**

    4.1 Source Elimination and Site Security ..... 3

    4.2 Containment and Site Stabilization ..... 3

**5.0 SITE ASSESSMENT ..... 3**

    5.1 General Site Characteristics ..... 3

        5.1.1 Depth To Ground Water ..... 3

        5.1.2 Distance To Nearest Potable Water Well..... 4

        5.1.3 Distance To Nearest Surface Water ..... 4

    5.2 Soil / Waste Characteristics ..... 4

        5.2.1 Highly Contaminated/Saturated Soils ..... 4

        5.2.2 Unsaturated Contaminated Soils ..... 4

    5.3 Ground Water Quality ..... 5

**6.0 SOIL REMEDIAL ACTION LEVELS ..... 5**

**7.0 SOIL SAMPLING PROCEDURES ..... 7**

**8.0 SOIL REMEDIATION ..... 8**

**9.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING ..... 9**

**APPENDIX A – FIGURES**

- Figure 1 – Topographic Map
- Figure 2 – Site Plan

**APPENDIX B – ANALYTICAL REPORT AND CHAIN OF CUSTODY**

**Remedial Action Plan**  
**Magnum Pronto State #4H Tank Battery Crude Oil Release**  
**SE ¼ SE ¼ Section 32, Township 19 South, Range 32 East, N.M.P.M.**  
**Lea County, New Mexico**  
**Terracon Project No. 68137010**  
**July 8, 2013**

## **1.0 SITE DESCRIPTION**

The site is an approximate 2-acre tract of cleared land within the SE ¼ SE ¼ Section 32, Township 19 South, Range 32 East, N.M.P.M., Lea County, New Mexico (hereinafter, the site). The site is developed with a tank battery (five crude oil ASTs), a separator, and a pump jack. A Topographic Map showing the site location is included as Figure 1 and a Site Plan is included as Figure 2 in Appendix A.

## **2.0 SCOPE OF SERVICES**

At your request, the scope of services is to develop a Remedial Action Plan (RAP) in accordance with the New Mexico Oil Conservation Division (OCD) requirements that detail site closure activities that the client will complete. This RAP addresses the February 19, 2013 release of approximately 50 barrels (BBL) of crude oil originating from overflowing of a High Sierra Transportation transport. Terracon understands that oversight and/or performance of these activities is not required by the client, and is not a part of this scope of services.

### **2.1 Standard of Care**

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, High Sierra Transportation, as reflected in our proposal.

### **2.2 Additional Scope Limitations**

Development of this RAP is based upon information provided by the Client and their remediation subcontractor, Allied International Emergency, LLC. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those by information provided by the Client and their subcontractor. The data, interpretations, findings, and our

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



recommendations are based solely upon data provided by the Client within the scope of these services.

### 2.3 Reliance

This report has been prepared for the exclusive use of High Sierra Transportation (HST), Allied International Emergencies, LLC (Allied), COG Operating LLC (COG), and Haz-Mat One, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of High Sierra Transportation and Terracon. Any unauthorized distribution or reuse is at High Sierra Transportation sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, LSI report, and Terracon's Agreement for Services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to High Sierra Transportation and all relying parties unless otherwise agreed in writing.

### 3.0 INTRODUCTION AND NOTIFICATION

A release of approximately 50 barrels (BBL) of crude oil occurred on February 19, 2013 at the Magnum Pronto State #4H tank battery facility in Lea County, New Mexico. The site is operated by COG Operating LLC (COG), 600 West Illinois Avenue, Midland, Texas. The site is an approximate 2-acre cleared area with five crude oil ASTs, a separator, and a pump jack approximately 20 miles south of Maljamar, New Mexico. Incident information is provided in the following table:

Required Information	Site and Release information
Responsible party and local contact	The facility is operated by COG Operating LLC, and the contact is Pat Ellis at (432) 230-0077. The transport company is High Sierra Transportation, and the contact is Larry Cash at (303) 396-9964.
OCD Notification	Immediate notice of the release was provided to the OCD. Michelle Mullins (COG) notified Geoffrey R. Leking, Environmental, OCD District 1 at 8:16 a.m. on February 20, 2013.
Facility description	The facility is Magnum Pronto #4H in Lea County, New Mexico. It is an approximate 2-acre tank battery located within the SE ¼ SE ¼ Section 32, Township 19 South, Range 32 East, N.M.P.M., approximately 20 miles south of Maljamar, New Mexico. The site is developed with a tank battery (five crude oil ASTs), a separator, and a pump jack.
Time of incident	February 19, 2013, discovered at 3:00 a.m.

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



Required Information	Site and Release information
Discharge event	The release occurred during transport loading. The HST transport driver fell asleep while loading crude oil, and overfilled the transport releasing approximately 50 BBL in the area west of the tank battery. The driver shut in the load line when discovered preventing further release. The spill area was completely within the location, covering approximately 6,000 square feet of the cleared area west of the battery. The spill area is shown on Figure 2 of Appendix A
Type of discharge	Crude oil
Quantity of spilled material	Approximately 50 BBL
Site characteristics	Relatively flat with hummocky dunes, with the native ground surface very gently sloping to the southwest.
Immediate corrective actions	A temporary berm was placed around the release. Approximately 20 BBL of crude oil was recovered using a vacuum truck.

## 4.0 INITIAL RESPONSE ACTIONS

### 4.1 Source Elimination and Site Security

Initial source elimination was accomplished by the HST truck driver by closing the load line valve. HST deployed their on-call spill response contractor, Allied International Emergency, LLC to secure the site and perform containment and site stabilization activities.

### 4.2 Containment and Site Stabilization

Allied began containment and recovery operations by constructing a perimeter berm around the release area. Allied then recovered approximately 20 BBL of crude oil using a vacuum truck.

## 5.0 SITE ASSESSMENT

### 5.1 General Site Characteristics

#### 5.1.1 Depth to Ground Water

The depth to groundwater at the site is anticipated to be over 100 feet below grade surface (bgs). A search of the New Mexico Office of the State Engineer (NMSEO) website identified no registered wells within one mile of the site. NMSEO registered wells within 5 miles of the site

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



have an average depth to ground water of 175 feet bgs, with a minimum reported depth of 102 feet bgs.

### 5.1.2 Distance to Nearest Potable Water Well

The nearest water well registered in the NMSEO database is approximately 1.9 miles to the northeast.

### 5.1.3 Distance to Nearest Surface Water

The Laguna Plata (playa) is approximately 1.5 miles southeast of the site.

## 5.2 Soil / Waste Characteristics

Soils at the site are mapped as Kermit soils and dune lands, 0 to 12 percent slopes. This soil has a surface layer of fine to coarse sand. Dunes in the area are 8 to 12 feet high. Interdune areas have a fine to coarse sand layer from 4 to 20 inches thick overlying a sandy clay loam. Kermit soil is very rapidly permeable and runoff is slow. Soil blowing is severe.

### 5.2.1 Highly Contaminated/Saturated Soils

Highly contaminated/saturated soils are defined as those soils which contain a free liquid phase or exhibit gross staining. The operator proposes to determine the final soil contaminant concentrations after a soil removal action at the site.

### 5.2.2 Unsaturated Contaminated Soils

Unsaturated contaminated soils are defined as soils which are not highly contaminated/saturated, as described above, but contain benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) or other potential fresh water contaminants unique to the release. Initial assessment of soil contaminant levels was performed at four locations across the release area to estimate the volume of soil requiring removal. The sample locations are shown on Figure 2 provided in Appendix A. Each location was sampled at the surface, at 1 foot bgs, and at 2 feet bgs.

Soil samples were analyzed for total petroleum hydrocarbons (TPH) by method Texas 1005, and percent moisture. Samples were analyzed by Xenco Laboratories of Odessa, Texas. Results of these analyses are summarized below:

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



### Soil Sample Analytical Summary

Sample ID	Percent Moisture	Total Petroleum Hydrocarbons (mg/kg)			
		C6-C12	C12-C28	C28-C35	Total TPH
SP1-1 (0')	2.53	5,350	38,100	4,910	48,400
SP1-2 (1')	3.11	437	791	82.2	1,310
SP1-3 (2')	2.77	187	442	46.8	676
SP2-1 (0')	5.85	8,170	17,600	1,620	27,400
SP2-2 (1')	4.33	3,160	6,320	673	10,200
SP2-3 (2')	3.95	680	1,940	206	2,830
SP3-1 (0')	2.28	3,070	35,600	3,550	42,200
SP3-2 (1')	2.67	165	313	31.5	510
SP3-3 (2')	3.13	163	350	31.0	544
SP4-1 (0')	2.16	1,390	23,600	2,660	27,700
SP4-2 (1')	7.36	3,020	6,670	619	10,300
SP4-3 (2')	8.36	598	1,300	126	2,020

The complete laboratory analytical report is provided in Appendix B.

### 5.3 Ground Water Quality

Ground water quality is unknown at the site. As stated previously, there are no wells registered with the NMSEO website within one mile of the site.

## 6.0 SOIL REMEDIAL ACTION LEVELS

Soil remedial action levels are described for highly contaminated/saturated soils and unsaturated contaminated soils. The OCD ranking criteria was used to determine remediation levels.

### 6.1 Highly Contaminated/Saturated Soils

The operator proposes to determine the final soil contaminant concentrations after a soil removal action at the site, therefore remediation levels of these soils are not determined herein.

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



### 6.2 Unsaturated Contaminated Soils

Remediation levels for unsaturated contaminated soils are based on the OCD ranking criteria, as detailed in the following section.

### 6.3 Ranking Criteria

The site characteristics are used to determine the ranking score for the site. The ranking total for the release site is determined based on the following criteria:

<u>Depth To Ground Water</u>	<u>Ranking Score</u>
<50 feet	20
50-99 feet	10
<b>&gt;100 feet</b>	<b>0</b>
<u>Wellhead Protection Area</u>	
<1,000 feet from a water source, or;	
<200 feet from private domestic water source	
Yes	20
<b>No</b>	<b>0</b>
<u>Distance To Surface Water Body</u>	
<200 horizontal feet	20
200 -1000 horizontal feet	10
<b>&gt;1,000 horizontal feet</b>	<b>0</b>

Depth to groundwater is greater than 100 feet bgs (ranking score of 0). The site is over 1,000 feet from water sources and private domestic wells (ranking score of 0). The site is also over 1,000 horizontal feet from the nearest surface water body (ranking score of 0) Therefore the total ranking score for the site is 0.

### 6.4 Remediation Levels

Remediation levels for benzene, total BTEX (includes benzene, toluene, ethylbenzene and xylenes), chloride, and TPH are selected based on the total ranking score of 0 for the release site. These remediation levels are as follows:

Constituent	Remediation Level (ppm, mg/kg)
Benzene	10
BTEX	50

**Remedial Action Plan**

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



Constituent	Remediation Level (ppm, mg/kg)
TPH	5,000
Chloride	1,000

**7.0 SOIL SAMPLING PROCEDURES**

Soil sampling procedures are detailed as follows:

**7.1 Highly Contaminated or Saturated Soils**

The operator proposes to determine the final soil contaminant concentrations after a soil removal action at the site. Highly contaminated or saturated soils will be removed from the site, disposed at an OCD-approved facility, and will not be sampled.

**7.2 Unsaturated Contaminated Soils**

**7.2.1 Soil Sampling Procedures for Headspace Analysis**

A headspace analysis may be used to determine the total volatile organic vapor concentrations in soils (ie. in lieu of a laboratory analysis for benzene and BTEX but not in lieu of chloride and TPH analysis). Headspace analysis procedures should be conducted according to OCD approved industry standards or other OCD-approved procedures. Accepted OCD procedures are as follows:

- Fill a 0.5 liter or larger jar half full of sample and seal the top tightly with aluminum foil or fill a one quart zip-lock bag one-half full of sample and seal the top of the bag leaving the remainder of the bag filled with air.
- Ensure that the sample temperature is between 15 to 25 degrees Celsius (59-77 degrees Fahrenheit).
- Allow aromatic hydrocarbon vapors to develop within the headspace of the sample jar or bag for 5 to 10 minutes. During this period, the sample jar should be shaken vigorously for 1 minute or the contents of the bag should be gently massaged to break up soil clods.
- If using a jar, pierce the aluminum foil seal with the probe of either a PID or FID organic vapor meter (OVM), and then record the highest (peak) measurement. If using a bag, carefully open one end of the bag and insert the probe of the OVM into the bag and re-seal the bag around the probe as much as possible to prevent vapors from escaping.

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



Record the peak measurement. The OVM must be calibrated to assume a benzene response factor.

### 7.2.2 Soil Sampling Procedures for Laboratory Analysis

#### Soil Sampling Procedures

Soil sampling for laboratory analysis will be conducted according to OCD approved industry standards or other OCD-approved procedures. Accepted OCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier.
- Label the samples with a unique code for each sample.
- Cool and store samples with cold packs or on ice.
- Promptly ship sample to the lab for analysis following chain of custody procedures.
- All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

#### Analytical Methods

All soil samples must be analyzed using EPA methods, or by other OCD approved methods and must be analyzed within the holding time specified by the method. Below are laboratory analytical methods the selected laboratory will use for analysis of soil samples analyzed for petroleum related constituents.

- Benzene, toluene, ethylbenzene and xylene - EPA Method 602/8020
- Chloride – EPA Method 300.0
- Total Petroleum Hydrocarbons -EPA Method 418.1, or; -EPA Method Modified 8015

## 8.0 SOIL REMEDIATION

Contaminated soil will be remediated and managed according to the criteria described below which will remove contaminants in order to protect fresh waters, public health and the environment.

## Remedial Action Plan

Magnum Pronto State #4H Release ■ Lea County, New Mexico  
July 8, 2013 ■ Terracon Project No. 68137010



### 8.1 Contaminated Soils

Highly contaminated/saturated soils and unsaturated contaminated soils exceeding the remediation levels described in Section 6 will be remediated as follows:

- Soils within the spill area shown on Figure 2 of Appendix A will be excavated to a maximum depth of 2 feet below ground;
- Following excavation, samples will be collected from the base of the excavation to determine the remaining levels of soil contaminants are below the remediation levels detailed in Section 6.

### 8.2 Soil Management

The selected method of soil management is removal and disposal at an OCD-approved facility. Excavated soils will be transported by truck (20 cubic yard capacity) and disposed of at the Parabo Disposal Facility operated by Sundance Services, Inc., located east of Eunice, New Mexico.

## 9.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

### 9.1 Termination of Remedial Action

Remedial action of soils at the site will be terminated when the following criteria have been met. Contaminated soils will be removed from the site as described in Section 8.2. Sufficient contaminated soil will be removed so that residual contaminant concentrations are below the soil remediation action levels detailed in Section 6.4.

If soil action levels cannot practicably be attained, an evaluation of risk will be performed and provided to OCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment.

### 9.2 Final Closure

Upon termination of remedial actions (Sections 6 and 8) the area of the release will be closed by backfilling the excavated area and contouring to provide drainage away from the site.

**Remedial Action Plan**

Magnum Pronto State #4H Release ■ Lea County, New Mexico

July 8, 2013 ■ Terracon Project No. 68137010



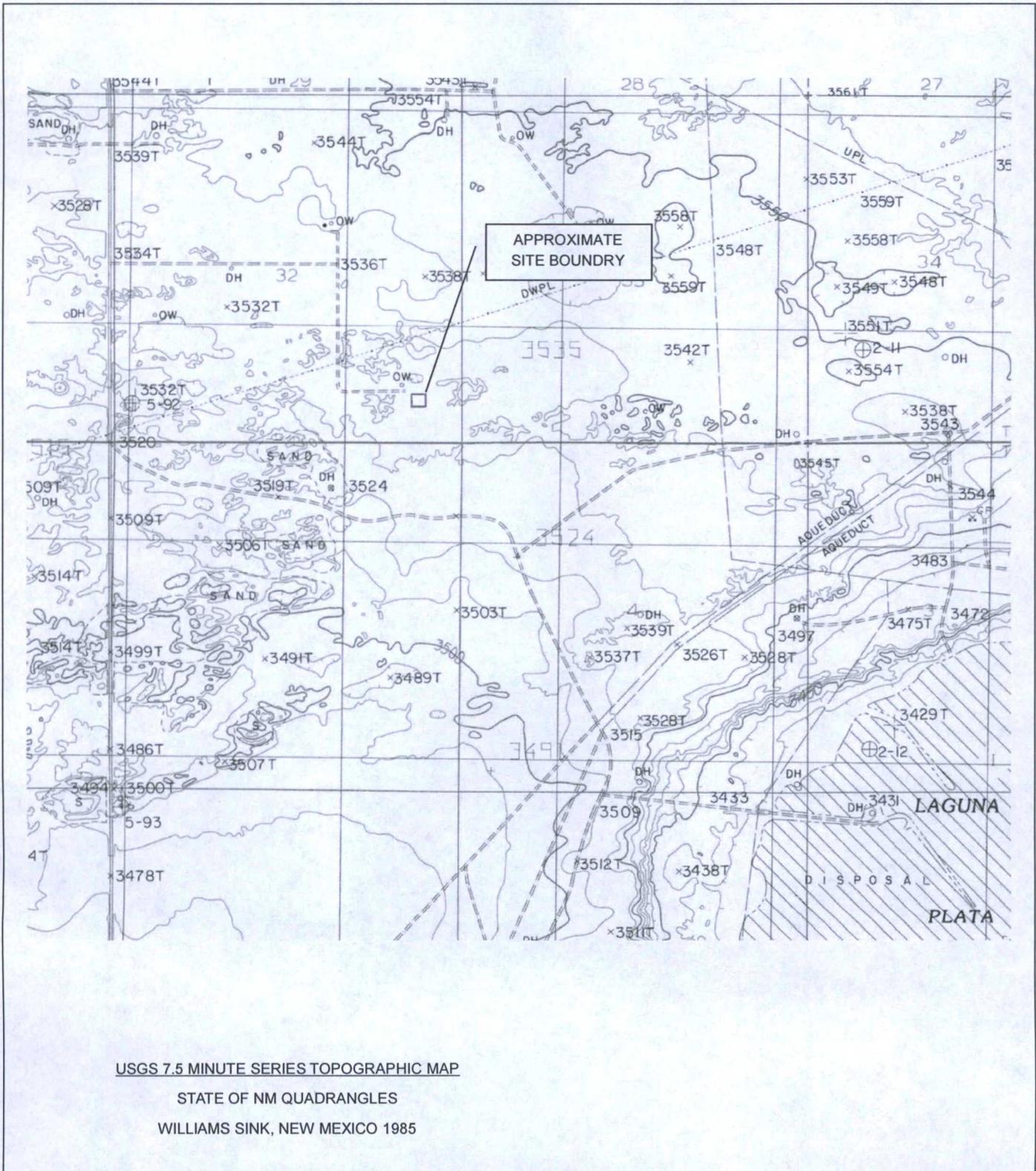
**9.3 Final Report**

Upon completion of remedial activities a final report summarizing all actions taken to mitigate environmental damage related to the release will be provided to OCD for approval.

## **APPENDIX A – FIGURES**

Figure 1 – Topographic Map

Figure 2 – Soil Sample Location Map



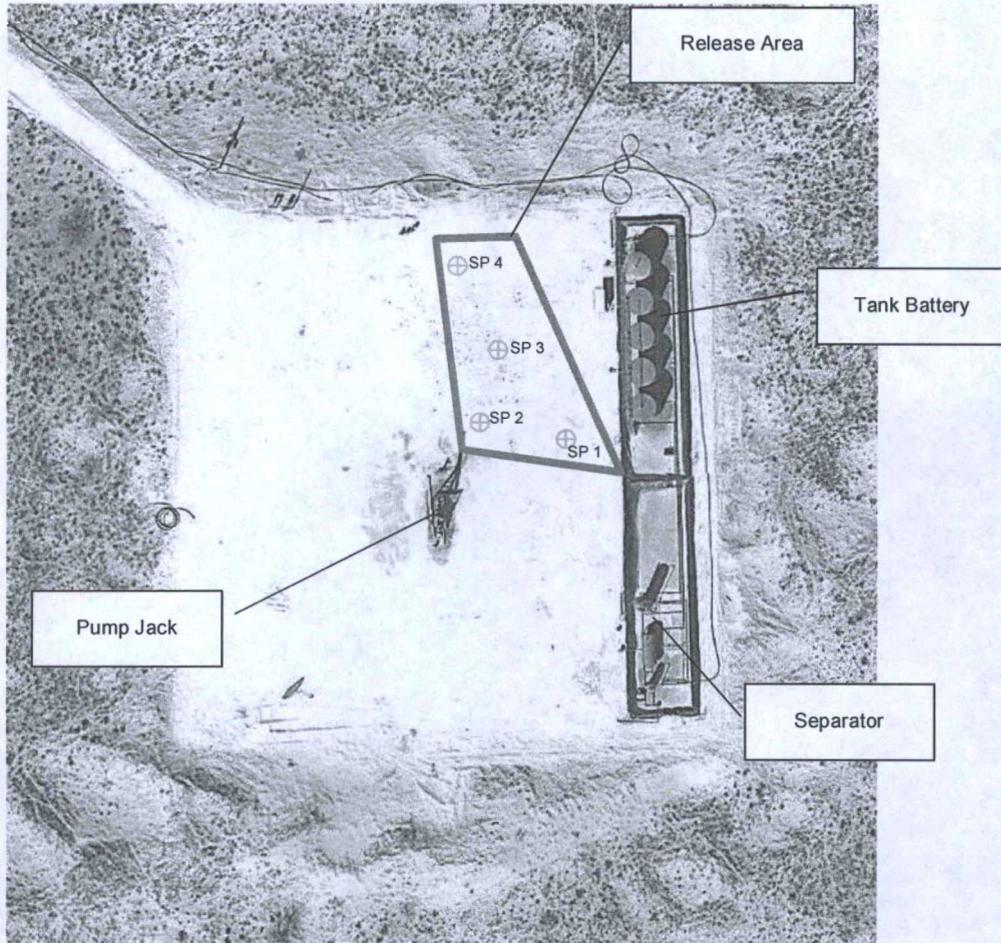
USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP  
 STATE OF NM QUADRANGLES  
 WILLIAMS SINK, NEW MEXICO 1985

Project Mgr	JKW	Project No	68137010
Approved by	JBS	Scale	1" = 2000'
Checked by	JBS	Date	6/4/13
Drawn by	JKW	File No.	Figure 1

**Terracon**  
 1640 Hickory Loop, Las Cruces, NM 88005  
 Suite 105  
 Ph: 575-527-1700 Fax: 575-527-1092

TOPOGRAPHIC MAP  
 Magnum Pronto State #4H Tank Battery  
 SE ¼ SE ¼ Section 32, T19S, R32E, N.M.P.M.  
 Lea County, New Mexico

FIGURE	1
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SOURCE: GOOGLE EARTH

⊕ SAMPLE LOCATION

Project Mgr	JKW	Project No	68137010
Approved by	JBS	Scale	1" = 100'
Checked by	JBS	Date	6/4/13
Drawn by	JKW	File No.	Figure 2

**Terracon**  
 1640 Hickory Loop, Suite 105  
 Las Cruces, NM 88005  
 Ph: 575-527-1700 Fax: 575-527-1092

SITE PLAN
Magnum Pronto State #4H Tank Battery SE ¼ SE ¼ Section 32, T19S, R32E, N.M.P.M.
Lea County, New Mexico

FIGURE	2
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**APPENDIX B – ANALYTICAL REPORT AND CHAIN OF  
CUSTODY**

# Analytical Report 460679

## for Allied International Emergency

**Project Manager: Chris Waters**

**Hazmat One/Conchd**

**30-04-13-1042**

**09-APR-13**

Collected By: Client



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

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), 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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Louisiana (04176), USDA (P330-07-00105)

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

Xenco-Lakeland: Florida (E84098)

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

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

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



09-APR-13

Project Manager: **Chris Waters**  
**Allied International Emergency**  
2333 Delante Ave  
Fort Worth, TX 76117

Reference: XENCO Report No(s): **460679**  
**Hazmat One/Conchd**  
Project Address: NM

**Chris Waters:**

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(s) 460679. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 460679 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,

---

**Nicholas Straccione**  
Project Manager

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



# Sample Cross Reference 460679



Allied International Emergency, Fort Worth, TX

Hazmat One/Conchd

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP1-1	S	04-04-13 14:15		460679-001
SP1-2	S	04-04-13 14:23		460679-002
SP1-3	S	04-04-13 14:27		460679-003
SP2-1	S	04-04-13 14:31		460679-004
SP2-2	S	04-04-13 14:34		460679-005
SP2-3	S	04-04-13 14:36		460679-006
SP3-1	S	04-04-13 14:40		460679-007
SP3-2	S	04-04-13 14:44		460679-008
SP3-3	S	04-04-13 14:46		460679-009
SP4-1	S	04-04-13 14:52		460679-010
SP4-2	S	04-04-13 15:09		460679-011
SP4-3	S	04-04-13 15:15		460679-012



## CASE NARRATIVE

*Client Name: Allied International Emergency*

*Project Name: Hazmat One/Conchd*



Project ID: 30-04-13-1042  
Work Order Number(s): 460679

Report Date: 09-APR-13  
Date Received: 04/05/2013

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-910759 TPH by Texas1005  
TX1005

Batch 910759, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike Duplicate.

Samples affected are: 460679-009, -003, -012, -002, -010, -008, -006.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

TX1005

Batch 910759, C28-C35 Oil Range Hydrocarbons RPD was outside QC limits.

Samples affected are: 460679-009, -003, -012, -002, -010, -008, -006



# Certificate of Analysis Summary 460679

Allied International Emergency, Fort Worth, TX

Project Name: Hazmat One/Conchd



Project Id: 30-04-13-1042

Contact: Chris Waters

Project Location: NM

Date Received in Lab: Fri Apr-05-13 12:10 pm

Report Date: 09-APR-13

Project Manager: Nicolás Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	460679-001	460679-002	460679-003	460679-004	460679-005	460679-006
	<i>Field Id:</i>	SP1-1	SP1-2	SP1-3	SP2-1	SP2-2	SP2-3
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-04-13 14:15	Apr-04-13 14:23	Apr-04-13 14:27	Apr-04-13 14:31	Apr-04-13 14:34	Apr-04-13 14:36
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-08-13 09:30					
	<i>Units/RL:</i>	% RL					
Percent Moisture		2.53 1.00	3.11 1.00	2.77 1.00	5.85 1.00	4.33 1.00	3.95 1.00
<b>TPH by Texas1005</b>	<i>Extracted:</i>	Apr-08-13 13:40	Apr-05-13 14:40	Apr-05-13 14:40	Apr-08-13 13:40	Apr-08-13 13:40	Apr-05-13 14:40
	<i>Analyzed:</i>	Apr-08-13 18:36	Apr-05-13 19:29	Apr-05-13 19:53	Apr-08-13 19:01	Apr-08-13 19:27	Apr-05-13 21:35
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		5350 256	437 25.8	187 25.7	8170 133	3160 131	680 26.0
C12-C28 Diesel Range Hydrocarbons		38100 256	791 25.8	442 25.7	17600 133	6320 131	1940 26.0
C28-C35 Oil Range Hydrocarbons		4910 256	82.2 25.8	46.8 25.7	1620 133	673 131	206 26.0
Total TPH 1005		48400 256	1310 25.8	676 25.7	27400 133	10200 131	2830 26.0

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.

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Nicholas Straccione  
Project Manager



# Certificate of Analysis Summary 460679

Allied International Emergency, Fort Worth, TX

Project Name: Hazmat One/Conchd



Project Id: 30-04-13-1042

Contact: Chris Waters

Project Location: NM

Date Received in Lab: Fri Apr-05-13 12:10 pm

Report Date: 09-APR-13

Project Manager: Nicholas Straccione

<i>Analysis Requested</i>	<i>Lab Id:</i>	460679-007	460679-008	460679-009	460679-010	460679-011	460679-012
	<i>Field Id:</i>	SP3-1	SP3-2	SP3-3	SP4-1	SP4-2	SP4-3
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
<i>Sampled:</i>	Apr-04-13 14:40	Apr-04-13 14:44	Apr-04-13 14:46	Apr-04-13 14:52	Apr-04-13 15:09	Apr-04-13 15:15	
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Apr-08-13 09:30					
	<i>Units/RL:</i>	% RL					
Percent Moisture		2.28 1.00	2.67 1.00	3.13 1.00	2.16 1.00	7.36 1.00	8.36 1.00
<b>TPH by Texas1005</b>	<i>Extracted:</i>	Apr-08-13 13:40	Apr-05-13 14:40	Apr-05-13 14:40	Apr-05-13 14:40	Apr-08-13 13:40	Apr-05-13 14:40
	<i>Analyzed:</i>	Apr-08-13 19:52	Apr-05-13 22:28	Apr-05-13 22:54	Apr-05-13 23:21	Apr-08-13 20:17	Apr-06-13 00:16
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		3070 255	165 25.7	163 25.8	1390 128	3020 135	598 27.3
C12-C28 Diesel Range Hydrocarbons		35600 255	313 25.7	350 25.8	23600 128	6670 135	1300 27.3
C28-C35 Oil Range Hydrocarbons		3550 255	31.5 25.7	31.0 25.8	2660 128	619 135	126 27.3
Total TPH 1005		42200 255	510 25.7	544 25.8	27700 128	10300 135	2020 27.3

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Nicholas Straccione  
Project 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 affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



# Form 2 - Surrogate Recoveries

Project Name: Hazmat One/Conchd

Work Orders : 460679,

Project ID: 30-04-13-1042

Lab Batch #: 910759

Sample: 460679-002 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 04/05/13 19:29	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by Texas1005</b>						
<b>Analytes</b>						
1-Chlorooctane		102	100	102	70-135	
o-Terphenyl		55.8	50.0	112	70-130	

Lab Batch #: 910759

Sample: 460679-003 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 04/05/13 19:53	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by Texas1005</b>						
<b>Analytes</b>						
1-Chlorooctane		102	100	102	70-135	
o-Terphenyl		55.0	50.0	110	70-130	

Lab Batch #: 910759

Sample: 460679-006 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 04/05/13 21:35	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by Texas1005</b>						
<b>Analytes</b>						
1-Chlorooctane		102	100	102	70-135	
o-Terphenyl		49.0	50.0	98	70-130	

Lab Batch #: 910759

Sample: 460679-008 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 04/05/13 22:28	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by Texas1005</b>						
<b>Analytes</b>						
1-Chlorooctane		100	100	100	70-135	
o-Terphenyl		53.7	50.0	107	70-130	

Lab Batch #: 910759

Sample: 460679-009 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 04/05/13 22:54	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
<b>TPH by Texas1005</b>						
<b>Analytes</b>						
1-Chlorooctane		99.8	100	100	70-135	
o-Terphenyl		53.0	50.0	106	70-130	

\* Surrogate outside of Laboratory QC limits  
 \*\* Surrogates outside limits; data and surrogates confirmed by reanalysis  
 \*\*\* Poor recoveries due to dilution  
 Surrogate Recovery [D] = 100 \* A / B  
 All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Hazmat One/Conchd

Work Orders : 460679,

Project ID: 30-04-13-1042

Lab Batch #: 910759

Sample: 460679-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/05/13 23:21

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.7	100	97	70-135	
o-Terphenyl	45.0	50.0	90	70-130	

Lab Batch #: 910759

Sample: 460679-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/13 00:16

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	54.6	50.0	109	70-130	

Lab Batch #: 910882

Sample: 460679-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/08/13 18:36

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.7	120	70-135	
o-Terphenyl	50.5	49.9	101	70-130	

Lab Batch #: 910882

Sample: 460679-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/08/13 19:01

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	48.8	50.1	97	70-130	

Lab Batch #: 910882

Sample: 460679-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/08/13 19:27

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	50.5	50.1	101	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



# Form 2 - Surrogate Recoveries

Project Name: Hazmat One/Conchd

Work Orders : 460679,

Project ID: 30-04-13-1042

Lab Batch #: 910882

Sample: 460679-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/08/13 19:52

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.6	107	70-135	
o-Terphenyl	57.4	49.8	115	70-130	

Lab Batch #: 910882

Sample: 460679-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/08/13 20:17

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	53.5	50.1	107	70-130	

Lab Batch #: 910759

Sample: 636226-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/05/13 16:11

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	100	99	70-135	
o-Terphenyl	52.2	50.0	104	70-130	

Lab Batch #: 910882

Sample: 636320-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/08/13 16:55

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	99.9	100	70-135	
o-Terphenyl	53.3	50.0	107	70-130	

Lab Batch #: 910759

Sample: 636226-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/05/13 15:22

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-135	
o-Terphenyl	59.7	50.0	119	70-130	

\* Surrogate outside of Laboratory QC limits  
 \*\* Surrogates outside limits; data and surrogates confirmed by reanalysis  
 \*\*\* Poor recoveries due to dilution  
 Surrogate Recovery [D] = 100 \* A / B  
 All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Hazmat One/Conchd

Work Orders : 460679,

Project ID: 30-04-13-1042

Lab Batch #: 910882

Sample: 636320-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/08/13 16:04

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.8	100	96	70-135	
o-Terphenyl	59.7	50.0	119	70-130	

Lab Batch #: 910759

Sample: 636226-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/05/13 15:46

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	100	94	70-135	
o-Terphenyl	59.4	50.0	119	70-130	

Lab Batch #: 910882

Sample: 636320-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/08/13 16:30

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	100	97	70-135	
o-Terphenyl	60.1	50.1	120	70-130	

Lab Batch #: 910759

Sample: 460679-009 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/13 00:43

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	100	91	70-135	
o-Terphenyl	53.7	50.0	107	70-130	

Lab Batch #: 910882

Sample: 460785-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/09/13 02:08

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	57.6	50.1	115	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



# Form 2 - Surrogate Recoveries

Project Name: Hazmat One/Conchd

Work Orders : 460679,

Project ID: 30-04-13-1042

Lab Batch #: 910759

Sample: 460679-009 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/13 01:11

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	100	96	70-135	
o-Terphenyl	56.2	50.0	112	70-130	

Lab Batch #: 910882

Sample: 460785-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/09/13 02:33

### SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	58.3	50.1	116	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



# BS / BSD Recoveries



Project Name: Hazmat One/Conchd

Work Order #: 460679

Analyst: KEB

Date Prepared: 04/05/2013

Project ID: 30-04-13-1042

Date Analyzed: 04/05/2013

Lab Batch ID: 910759

Sample: 636226-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<25.0	1000	954	95	1000	928	93	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<25.0	1000	1060	106	1000	1040	104	2	70-135	35	

Analyst: KEB

Date Prepared: 04/08/2013

Date Analyzed: 04/08/2013

Lab Batch ID: 910882

Sample: 636320-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<25.0	1000	942	94	1000	944	94	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<25.0	1000	994	99	1000	981	98	1	70-135	35	

Relative Percent Difference RPD = 200\*((C-F)/(C+F))

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

Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries

Project Name: Hazmat One/Conchd

Work Order #: 460679

Project ID: 30-04-13-1042

Lab Batch ID: 910759

QC- Sample ID: 460679-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04/06/2013

Date Prepared: 04/05/2013

Analyst: KEB

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 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
C6-C12 Gasoline Range Hydrocarbons	163	1030	1080	89	1030	1240	105	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	350	1030	1490	111	1030	1880	149	23	70-135	35	X

Lab Batch ID: 910882

QC- Sample ID: 460785-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04/09/2013

Date Prepared: 04/08/2013

Analyst: KEB

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 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
C6-C12 Gasoline Range Hydrocarbons	<28.1	1130	1110	98	1120	1070	96	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	57.4	1130	1160	98	1120	1130	96	3	70-135	35	

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: Hazmat One/Conchd**

**Work Order #: 460679**

**Lab Batch #: 910788**

**Project ID: 30-04-13-1042**

**Date Analyzed: 04/08/2013 09:30**

**Date Prepared: 04/08/2013**

**Analyst: WRU**

**QC- Sample ID: 460597-001 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.30	6.43	2	20	

**Lab Batch #: 910789**

**Date Analyzed: 04/08/2013 09:30**

**Date Prepared: 04/08/2013**

**Analyst: WRU**

**QC- Sample ID: 460679-007 D**

**Batch #: 1**

**Matrix: Soil**

**Reporting Units: %**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.28	2.24	2	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



**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD**



4143 Greenbriar Drive, Stafford, TX 77477 **281-240-4200**  
 5332, Blackberry Drive, San Antonio, TX 78238 **210-509-3334**

9701 Harry Hines Blvd., Dallas, TX 75220 **214-902-0300**  
 12600 West I-20 East, Odessa, TX 79765 **432-563-1800**

Serial #: **328038** Page **2** of **2**

Company-City **ALLIED INTERNATIONAL EMERGENCY** Phone **432-813-4211** Lab Only: **460679**  
 Project Name-Location  Previously done at XENCO Project ID **TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d** Standard TAT is project specific.  
**HAZMAT ONE/CONCHO 30-04-B-1042** It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

Proj. State: TX, AL, FL, GA, LA, MS, NC, Proj. Manager (PM) **CHRIS WATERS**  
 NJ, PA, SC, TN, UT Other **NM**

E-mail Results to  PM and **LYNN@AIEEMERGENCY** Fax No:  
 Invoice to  Accounting  Inc. Invoice with Final Report  Invoice must have a P.O.  
 Bill to: **2333 DELANTE AVE. FT. WORTH TX 76117**

Quote/Pricing: P.O. No: **1042**  Call for P.O.  
 Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP

QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:  
 Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)

Sampler Name **CHRIS WATERS** Signature

Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	Remarks
1 SP4-2	4-4-13	1509		S	X		1	4	C	C	
2 SP4-3	4-4-13	1515		S	X		1	4	C	C	
3											
4											
5											
6											
7											
8											
9											
10											

VOA: Full-List BTEX-MTBE EIOH Oxyg VOAs  
 VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:  
 PAHs SIM 8310 8270  
 TX-1005 DRO GRO MA EPH MA VPH  
 SVOCs: Full-List DW BN&E TCLP PP Appdx-2 CALL  
 OC Pesticides PCBs Herbicides OP Pesticides  
 Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2  
 SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)  
 EDB / DBCP

Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	Remarks
1 SP4-2	4-4-13	1509		S	X		1	4	C	C	
2 SP4-3	4-4-13	1515		S	X		1	4	C	C	
3											
4											
5											
6											
7											
8											
9											
10											

Relinquished by (Initials and Sign) **CC** Date & Time **04/05/13 11:35** Relinquished to (Initials and Sign) **Bob** Date & Time **4-5-13 11:35** Total Containers per COC: **2** Cooler Temp: **1.0 °C**  
 1) **CC** 2) **Bob**  
 3) **Bill** 4) **Shaw**  
 5) **Bill** 6) **Shaw**  
 Date & Time: **4-5-13 12:10** Date & Time: **4-5-13 12:10**

Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)  
 Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other \_\_\_\_\_ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L) Committed to Excellence in Service and Quality www.xenco.com

Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



# XENCO Laboratories



## Prelogin/Nonconformance Report- Sample Log-In

Client: Allied International Emergency

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 04/05/2013 12:10:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 460679

Temperature Measuring device used :

### Sample Receipt Checklist

### Comments

#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
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Checklist completed by: \_\_\_\_\_

Date: \_\_\_\_\_

Checklist reviewed by: \_\_\_\_\_

Date: \_\_\_\_\_