DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: La Gloria Oil and Gas Company
Facility Address: 1702 East Commerce St., Tyler, TX 75702
Facility EPA ID #: TXD007333800

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X If yes - check here and continue with #2 below.

____ If no - re-evaluate existing data, or

____ if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	X			LNAPL GW Plume/Benzene
Air (indoors)[2]				
Surface Soil (e.g., <2 ft)				
Surface Water				
Sediment				
Subsurf. Soil (e.g., >2 ft)	X			Benzene from Contact with LNAPL Plume
Air (outdoors)				

____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

X If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Groundwater (Onsite and Offsite LNAPL Plume)
Contaminant: Benzene
Measured Concentration: 2.903 mg/L
Acceptable Risk Concentration: 0.005 mg/L
Reference: Chapter 30 Texas Administrative Code Subchapter S

Subsurface Soil (Contact with LNAPL Groundwater Plume)
Contaminant: Benzene
Measured Concentration: 250 mg/kg
Acceptable Risk Concentration: 1.62 mg/kg
Reference: Chapter 30 Texas Administrative Code Subchapter S

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater	no	no	no	no			no
~~Air (indoors)~~	--	--	--				
~~Soil (surface, e.g.,~~ <2 ft)	--	--	--	--	--	--	--
~~Surface Water~~	--	--			--	--	--
~~Sediment~~	--	--			--	--	--
Soil (subsurface e.g., >2 ft)				no			no
~~Air (outdoors)~~	--	--	--	--	--		

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("____"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

_X_ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

____ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

The contaminated media is located below surface in areas that are fenced for security. The recovered groundwater is handled in a totally enclosed system. The only workers allowed to excavate the contaminated subsurface soil have proper training and personal protective equipment to prevent exposure. There are no residences located in the areas with contaminated media.

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be

"**significant**"[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

_____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

[4] If
there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

SWR 30872

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

_X_ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **La Gloria Oil & Gas Co.** facility, EPA ID # **TXD007333800**, located at **1702 E. Commerce St., Tyler, TX** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

___ NO - "Current Human Exposures" are NOT "Under Control." Doc 6513

___ IN - More information is needed to make a determination. Rep 2892
(1) **Incomplete information**
(2) **Reports in house, yet to be reviewed**
(3) **Unfamiliar site**

For "NO" or "IN" determination, expected date of "YE" determination _____

Completed by (signature) [signature] Date: 1/25/2000
(print) Geof Meyer
(title) Project Manager

Supervisor (signature) [signature] Date: 1/25/2000
(print) Jason Wang
(title) Team Leader, Corrective Action Team IV.
(EPA Region or State) Texas

Locations where References may be found:

If "YE" Code is assigned then attach a copy of database, highlight the reports which support "YE"determination.
Attached highlighted database printout

Contact telephone and e-mail numbers

(name) Geof Meyer
(phone #) (512) 239-2577
(e-mail) gmeyer@tnrcc.state.tx.us

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

Query variables used to produce this report:

Search on: 30872

For: All Documents

With: No Date Range Restrictions From: Through:

LA GLORIA OIL AND GAS CO SWR/Fac ID 30872 Facility Project Manager GMEYER

Doc#	Date Rcd	Dated	Title		Type	Description	Due Date	Finished Date	Doc Comment
6553	11/16/1999	11/11/1999	3RD QUARTER 1999 GW RPT		RPT	LTM/GW	3/15/2000		
5687	9/10/1999	8/31/1999	JULY '99 SEMI-ANNUAL GROUND WATER RPT COPIES	2	RPT	LTM/GW	1/8/2000	1/6/2000	
6006	10/6/1999	10/1/1999	COMPLIANCE PLAN CERTIFICATION OF WELL INSTALL. & WELL PLUGGING		RPT	MISC	1/4/2000	1/4/2000	
4517	6/14/1999	6/10/1999	2/23/89 AGREED ORDER, GROUNDWATER SAMPLING, GAUGING, & REPORTING		RPT	LTM/GW	10/12/1999	9/17/1999	
4323	5/20/1999	5/11/1999	MONITOR WELL SAMPLING, FIRST QUARTER 1999		RPT	LTM/GW	9/17/1999	9/17/1999	
4580	6/18/1999	6/11/1999	COMPLIANCE PLAN - WELLS FOR GW SAMPLING		WP	MISC	9/16/1999	1/19/2000	
4472	6/10/1999	6/5/1999	WORK PLAN FOR INSTALLATION OF RCRA POINT OF COMPL WELLS @ AERATION BAS		WP	MISC	9/8/1999	1/12/2000	
4475	6/9/1999	6/2/1999	6/99 WP FOR OFFSITE INSTALL. OF 16 RECOVERY WELLS & 7 MONITOR WELLS		WP	MISC	9/7/1999	1/11/2000	
3577	3/23/1999	3/22/1999	1998 ANNUAL REPORT REQUIRED BY 2/23/89 AGREED ORDER		RPT	MISC	6/21/1999	4/1/1999	
7303	1/21/2000	1/18/2000	REPONSE TO 1/11/00 TNRCC LTR RE: 6/99 WORK PLAN		NOD RESP				
7252	1/20/2000	1/18/2000	ACCESS TO HAYNES & LEWIS ESTATE (LETTER FROM PARKER WILSON)		CC	NRN			
7227	1/18/2000	1/11/2000	RESPONSE TO CONCERNS RE: WELL INSTALLATIONS IN 10/1/99 SUBMITTAL		LTR	NRN		1/21/2000	
6513	11/15/1999	11/9/1999	GPRA RESPONSE W/FORMS CA725 & 750		RPT	NRN		12/10/1999	
6256	10/28/1999	10/25/1999	ACCESS TO OFFSITE PROPERTIES FOR GW INVESTIGATION & REMEDIATION		LTR	NRN		10/29/1999	Letter is request for our help getting off-site access. Legal will take lead.
6222	10/25/1999	10/22/1999	ACCESS TO RUDMAN PARTNERSHIP PROPERTY (LOT 9, BLOCK 617 & 618, LOT 12		CC	NRN		10/28/1999	
4473	6/10/1999	6/7/1999	6/1/99 TELEPHONE CONFERENCE ABOUT COMPLINACE PLAN IMPLEMENTATION		LTR	NRN		7/31/1999	
4364	5/26/1999	5/7/1999	ON-SITE GW/LIQUID HYDROCARBON MONITOIRNG & GAUGING PROG. 1ST QTR 1999		CC	NRN		9/17/1999	
4342	5/24/1999	5/20/1999	CORRECTION TO 5/17/99 LETTER OF PROPOSED GW RECOVERY SYSTEM MODIFICATI		LTR	NRN		7/31/1999	
4350	5/24/1999	5/17/1999	LA GLORIA CONCERNS RE: TNRCC'S 4/27/99 LTR ON CLEANUP METHOD		CC	NRN		7/31/1999	
7109	5/20/1999	5/17/1999	NOTIFICATION OF PROPOSED GROUNDWATER RECOVERY SYSTEM MODIFICATIONS		LTR			1/10/2000	
4330	5/17/1999		REQUEST FOR EXTENSION OF TIME TO FILE MOTION FOR REHEARING		CC	NRN		7/31/1999	
4245	5/14/1999	5/10/1999	ISSUED COMPLIANCE PLAN W/O DUE CONSIDERATION OF COMMENTS		LTR	NRN		7/31/1999	

LA GLORIA OIL AND GAS CO SWR/Fac ID 30872 Facility Project Manager GMEYER

Doc#	Date Rcd	Dated	Title	Type	Description	Due Date	Finished Date	Doc Comment
3578	3/23/1999	3/17/1999	MONITOR WELLS ON ROOSTH PROPERTY AND HAYNES/LEWIS PROPERTY	LTR	NRN		3/29/1999	
3141	2/8/1999	2/5/1999	RCRA MONITOR WELL SAMPLING, 4TH QUARTER 1998	RPT	NRN		9/17/1999	Review comments by Permits Section.
2675	1/11/1999	1/5/1999	COMMENTS ON FINAL DRAFT COMPLIANCE PLAN	LTR	CP/NEW			
2600	12/17/1998	12/14/1998	LIST OF SUBMITTALS REQUIRING TNRCC ACTION	LTR	NRN		1/21/1999	
2350	12/14/1998	12/10/1998	FEBRUARY 4, 1998 LETTER FROM DAVID DAVIS REGARDING ON-SITE RECOVERY SY	LTR	MISC			
2172	11/30/1998	11/24/1998	CORRECTIVE ACTION UPDATE MEETING AGENDA	LTR	NRN		1/26/1999	
777	11/9/1998	11/4/1998	RCRA MONITOR WELL SAMPLING, THIRD QUARTER 1998	RPT	NRN		3/22/1999	
709	11/2/1998	10/29/1998	ON-SITE GROUNDWATER/LIQUID HYDROCARBON MONITORING	RPT	PCC/O&M			
578	10/27/1998	9/23/1998	SUMMARY REPORT - TRIBUTARY "D" GROUND-WATER RECOVE	RPT	PCC/O&M			
1586	7/24/1998		On-Site GW/Hydrocarbon Mon. Report Sec. Quarter 1998	RPT	LTM/GW			
1585	7/14/1998		phase ii groundwater inv report	RPT	INV/ASSESS			
1584	2/18/1998		gw monitoring report	RPT	LTM/GW			
1583	1/27/1998		off-site access request	LTR	NRN		1/4/2000	
1582	1/7/1998	12/19/1997	1997 second/third qtr gw monitoring report	RPT	LTM/GW		2/4/1998	
1577	11/24/1997	11/20/1997	revised rfi report for main plant rfi-17	RPT	INV/ASSESS			
1578	11/24/1997	11/20/1997	revised rfi report for u & l pond	RPT	INV/ASSESS			
1581	10/24/1996		closure plan for api separator nor 015	WP	INV/ASSESS			
1579	10/22/1996	9/13/1996	revised cmi report	RPT	PCC/O&M			
1580	1/29/1990		certification for class ii sulphur landfill	RPT	RRS0			

Number of Documents = 41

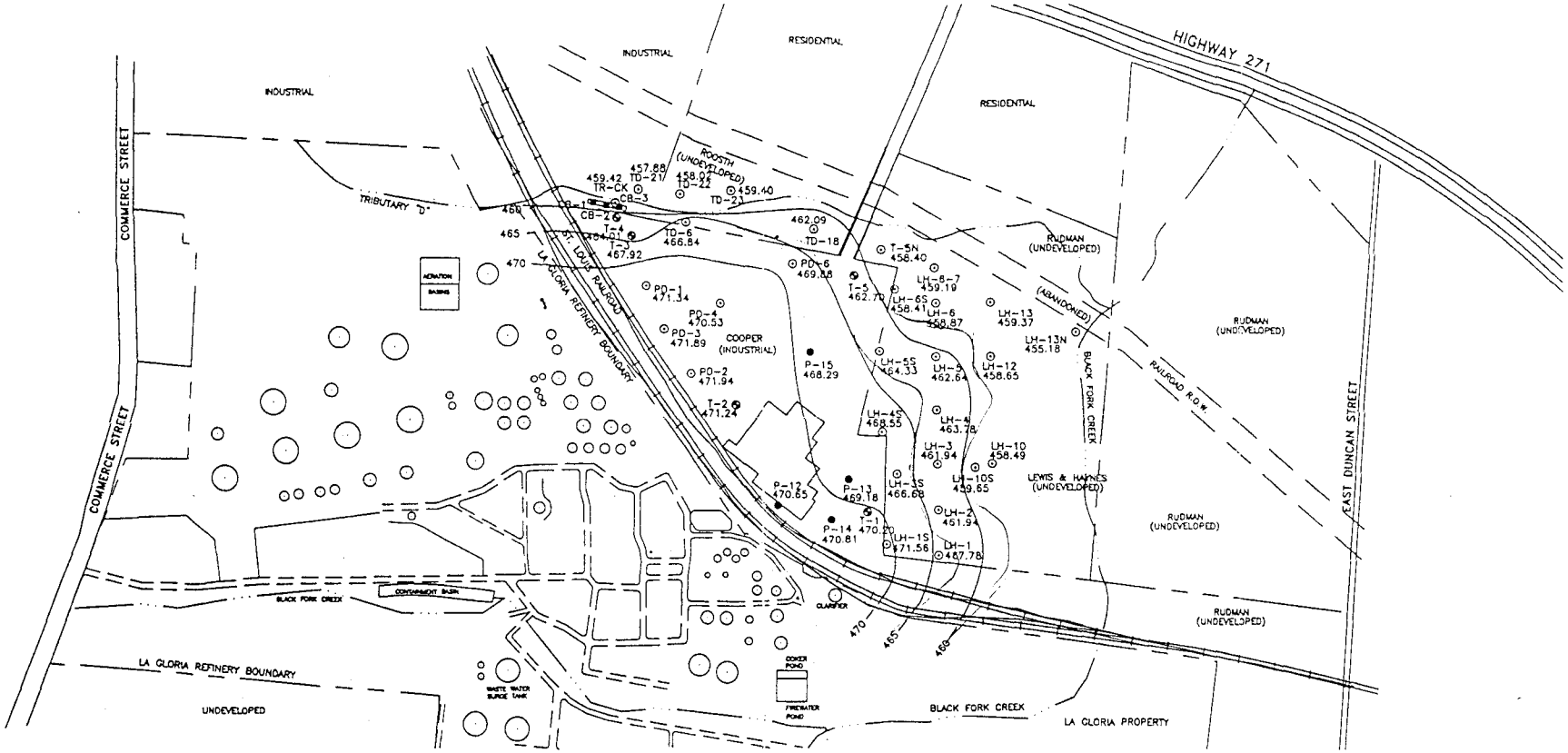
Total # of Documents = 41

Document Type	Total
CC	5
LTR	12
NOD RESP	1
RPT	19
WP	4
	41

Document Description	Total
	0
CP/NEW	1
INV/ASSESS	4
LTM/GW	7
MISC	6
NRN	17
PCC/O&M	3
RRS0	1
	39

NOTES: If query was by Project Manager, the documents listed are those assigned to that Project Manager. In most cases, this PM is the same as the facility PM.
The list for each company / facility is sorted by "Date Received" (reverse chronological order).
Project Managers should review, verify, update the information in all shaded fields.

..\task_p.rsl



LEGEND

T-1	MONITOR WELL LOCATION & NUMBER (INSTALLED IN 1989 & 1993)
P-13	PIEZOMETER LOCATION & NUMBER (INSTALLED IN 1996)
LH-1	PIEZOMETER LOCATION & NUMBER (INSTALLED IN 1997)
CB-1	CB RECOVERY TRENCH WELL LOCATION & NUMBER
P-14 470.81	CORRECTED WATER ELEVATION (ft. msl) *

NOTE: OFFSITE PROPERTY OWNERSHIP OBTAINED FROM TAX ASSESSOR'S OFFICE.

SCALE IN FEET

0 500 1000

NOTES: 1) VALUES FOR TD-21, TD-22, TD-23, AND LH-13N ARE FOR MARCH, 1998.

2) OFFSITE PROPERTY OWNERSHIP OBTAINED FROM TAX ASSESSOR'S OFFICE

FIGURE 3-1
CORRECTED SHALLOW GROUND-WATER SURFACE MAP - JANUARY 1998

LaGloria Oil & Gas Company
TYLER REFINERY - TYLER, TEXAS

CAD AP/HOU DATE: 27-JULY-98 SCALE:
FILE FIG3-1 CHECKED EXAMINED

CH2MHILL