



Site  
Investigation  
Report  
Review

SIRR Report  
for  
Unassigned Uncontrolled Sites

SIRR ID P77-0065

Site Name QUIKTRIP STORE #516R

City Location Des Moines

Site Type Property Audit

County Polk

Screening Activity Initial Site Screening

**SITE INFORMATION**

Property Owner QuikTrip Corporation

Mailing Address Shawn McClanahan  
QuikTrip Corporation  
901 North Mingo  
Tulsa, OK 74101-3475

Location/Legal Description 900 East University  
Des Moines, Iowa

Size Of Property 1.5 acres

Report Prepared By Barker, Lemar & Associates

Date Report Submitted 05/18/2000

Report Submitted By Barker, Lemar & Associates

Current Usage Commercial

**REPORT INFORMATION SUMMARY**

**I. Summarize the data submitted (no., type, depth of soil borings, surface samples, ground water samples, other sampling conducted, analyses performed, contamination identified, etc.)**

Phase II Environmental Site Assessment, Barker-Lemar, May 2000

**NOTE:**

Starting in February 1997, Barker-Lemar has document the extent of petroleum contamination associated with the former Conoco station on the corner of E. 9th and University. This information is not discussed or referred to in the May 2000 assessment report.

Field activities were conducted in March and April 2000.

In March five borings were installed around the center of the site. Four of the five borings were located outside the area of contamination associated with the LUST site and each boring was at least 100 feet from the nearest boring (100 by 200 feet).

Soil samples were collected from the shallow subsurface (0.5 to 2') and mixed together as a composite sample. The composite sample was analyzed for heavy metals (total and TLCP metals), VOCs, semi-volatile compounds, banned pesticides, and PCBs. The heavy results showed values within or near the normal range for metals in Iowa soil with no TLCP values near the

<sup>metal</sup>

Friday, June 09, 2000



## Site Investigation Report Review

**SIRR ID** P77-0065  
**Site Name** QUIKTRIP STORE #516R

RCRA regulatory limit. The total metals included arsenic at 8.5 mg/kg, lead at 159 mg/kg and cadmium at 1.9 mg/kg. The only VOC found above minimum detection limits was toluene (0.002 mg/kg). Ten semi-volatile compounds were found above minimum detection's limits, but generally at less than 1 mg/kg. This included benzo(a)pyrene at 0.8 mg/kg. Two banned pesticides (4,4'-DDT and beta-BHC) were found above minimum detection limits but less than 0.01 mg/kg. No PCBs were found above minimum detection limits.

Deeper soil samples were collected from two of the boring locations and analyzed for petroleum compounds. The sample collected from the boring near the LUST site (B-3) showed contamination with ethylbenzene (1.56 mg/kg), xylenes (4.52 mg/kg) and TEH as gasoline (356 mg/kg). No petroleum compounds were found above the minimum detection limits in the sample from the other boring (B-5) which was located approximately 250 feet east of the LUST site.

Temporary monitoring wells were installed in three of the borings (B-1, B-3, B-5) and groundwater samples were collected for the analyses of petroleum compounds. The sample from the boring in the LUST area (B-3) showed contamination with petroleum compounds. This included benzene (4.4 ug/l), toluene (46.7 ug/l), ethylbenzene (408 ug/l), and xylenes (1480 ug/l). Groundwater samples were also collected from one of the monitoring wells for the LUST site (TMW-2). Samples were collected for the analyses of VOC, petroleum compounds, semi-volatile compounds, banned pesticides, PCBs and heavy metals. The results showed similar levels of petroleum compounds as documented in previous monitoring for the LUST site. No banned pesticides or PCBs were found above minimum detection limits. Three metals were found above minimum detection limits. These were arsenic (0.04 mg/l), lead (0.015 mg/l), and zinc (0.088 mg/l).

In April 2000 five borings were installed near the locations of five borings installed in March. Composite soil samples were collected from the surface to a depth of ten feet. These samples were analyzed for semi-volatile compounds. Several PAH compounds were detected in three of the boring samples but all less than 0.1 mg/kg.

### **II. Summarize the site history (past usages, known or suspected contamination pathways such as tanks, S.W. burial, septic tank/tile field, lagoon, land application, etc.)**

Phase II Environmental Site Assessment, Barker-Lemar, May 2000 and LUST File: 9LTE65

QuikTrip has purchased three properties to build a new super store across the street from its current store location (QuikTrip #516). The three properties are the Former Child Psychiatric Associates (900 East University), U.S. Postal Workers Union (1118 E. University), and an abandoned house (1224 E. 12th Street).

The property at 900 East University was a former Conoco filling station which had four USTs. The tanks were filled with sand in 1981. Soil and groundwater contamination with petroleum was identified in the area these tanks in February 1997. The former owner, Child Psychiatric Associates, contacted the LUST Section and site had progressed to the submittal of a Tier 2 Site Cleanup Report on November 18, 1999. On May 3, 2000, the department received a request to withdraw the report because of the new owner's (QuikTrip) plans to remove the old tanks prior to constructing the new store. This request was approved with the condition that the revised Tier 2 report be resubmitted by October 30, 2000.

### **III. Summarize the other relevant information (include what may have been learned or known from sources other than the report itself, such as DNR files)**

LUST File 9LTE65

The investigation of the site under the LUST program has documented the release of petroleum compounds around the old tanks and dispenser islands. The extent soil and groundwater contamination has been defined on the west part of the site



## Site Investigation Report Review

**SIRR ID** P77-0065  
**Site Name** QUIKTRIP STORE #516R

sufficient to support a Tier 2 report. The Tier 2 report was withdrawn because the planned removal of tanks (and contaminated soil?) and the installation of new tanks was expected to provide additional information about the extent of contamination. The Tier 2 report will be resubmitted with consideration for this new information. The LUST reports have identified the direction of groundwater flow to the southwest and the affected groundwater as non-protected groundwater based on hydraulic conductivity measurements.

The tank program will continue to have jurisdiction over the west part site, both with respect to any remediation required for the former Conoco station and for the operation of the new QuikTrip store.

### REVIEW SUMMARY

**Contaminant Type** Petroleum & Other

**I. Summarize your findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values known criteria such as water quality standards, MCLs, established cleanup levels, background or any other relevant or useful benchmarks used to determine the site's priority.**

Soil and groundwater contamination with petroleum hydrocarbons was found in the area of the former Conoco station. This part of the site will continue to be dealt with by the LUST program and requires no other comment in our response letter.

The dissolved metals results from the sample collected from one of the LUST site monitoring wells, showed lead at 0.015 mg/l (not at 0.02 mg/l as reported in Table 9). The drinking water standard for lead is 0.015 mg/l (state groundwater standard for a protected groundwater source). The other two detected metals (arsenic and mercury) were below the drinking water standards.

The composite soil sample technique for the five near-surface soil sample locations raises some question about the results for heavy metals and the PAH compound benzo(a)pyrene. By themselves, the composite sample results did not exceed levels of regulatory concern. However, if the composite included background levels for four locations and a hot spot for one location, the site could present an exposure risk from incidental soil ingestion. This potential risk is for two of the metals (arsenic at 8.5 mg/kg and lead at 159 mg/kg) and benzo(a)pyrene at 0.8 mg/kg if a hot spot has contaminant levels approximately five times these values.

NOTE: The statewide soil standard for arsenic is 1.4 mg/kg. However, the department has determined that the normal background range is between 5 to 10m mg/kg and generally considers anything less than 15 mg/kg as representative of background. The statewide standard for the PAH benzo(a)pyrene is 0.29 mg/kg. However, based on our experience with the cleanup of coal tar sites, cleanup below 1 to 2 mg/kg for specific compounds is technically infeasible and definitely should not be required below 1 mg/kg.

**II. Summarize the potential or actual impacts of the contamination. What is known about the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there wells in the area that could be potentially impacted? Are there identified contaminant pathways such as water or sewer lines, drain tiles, or fissures? Identify any other use/location issues that deserve consideration in any priority assignment.**

The site is in a mixed residential/commercial neighborhood. The site will be used for a new QuikTrip store and will be mostly covered by buildings or concrete pavement.



**Site Investigation Report Review**

**SIRR ID** P77-0065  
**Site Name** QUIKTRIP STORE #516R

**III. Summarize any other information, knowledge, or reasoning used in determining your recommendation regarding the priority assigned to this site.**

The department has been dealing with part of the site under LUST authority since early 1997. This involvement will continue and does not require any referral for further action from our section.

No significant evidence of other types of soil and groundwater contamination are shown in the sample results. However, the composite sample technique for the surface samples indicates the site could have significant soil contamination. Our concerns with this sample technique should be included in our response letter.

**PRIORITY LEVEL**

**Priority Level** 3-4

**PROGRAM AUTHORITY REFERRAL**

**Program Authority Referral** No Further Action

**Other Referral**

**ISS/Form Completed By** John Vedder

**Date ISS Completed** 06/09/2000

**ESS Completed B**

**Date ESS Completed**

**Date Completed**

**Form Reviewed** Susan Dixon

*Susan Dixon*

**Date Reviewed**

*6/13/00*

# PRE-CERCLIS SCREENING ASSESSMENT CHECKLIST/DECISION FORM

This checklist can assist the site investigator during the Pre-CERCLIS screening. It will be used to determine whether further steps in the site investigation process are required under CERCLA. Use additional sheets, if necessary.

**Checklist Preparer:** John Vedder/Environmental Specialist Senior June 9, 2000  
(Name/Title) (Date)  
Iowa DNR (515) 242-5087  
(Address) (Phone)

(E-Mail Address) \_\_\_\_\_

**Site Name:** Quik Trip Store #516R

**Previous Names (if any):** \_\_\_\_\_

**Site Location:** 900 East University  
(Street)  
Des Moines , IA - \_\_\_\_\_  
(City) (ST) (Zip)

**Latitude:** \_\_\_\_\_ **Longitude:** \_\_\_\_\_

Complete the following checklist. If "yes" is marked, please explain below.

	YES	NO
1. Does the site already appear in CERCLIS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Is the release from products that are part of the structure of, and result in exposure within, residential buildings or businesses or community structures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Does the site consist of a release of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Is the release into a public or private drinking water supply due to deterioration of the system through ordinary use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Is some other program actively involved with the site (i.e., another Federal, State, or Tribal program)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (i.e., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Are the hazardous substances potentially released at the site excluded by policy considerations (e.g., deferral to RCRA Corrective Action)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Is there sufficient documentation that clearly demonstrates that there is no potential for a release that could cause adverse environmental or human health impacts (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, EPA approved risk assessment completed)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Please explain all "yes" answer(s), attach additional sheets if necessary:** Active LUST site  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Determination:

Enter the site into CERCLIS. Further assessment is recommended (explain below).

The site is not recommended for placement into CERCLIS (explain below).

**DECISION/DISCUSSION/RATIONALE:**

Refer to attached SIRR Report.

Regional EPA Reviewer:

\_\_\_\_\_  
Print Name/Signature

\_\_\_\_\_  
Date

State Agency/Tribe:

Susan Dixon/  
\_\_\_\_\_  
Print Name/Signature

*Susan Dixon*

6/13/00  
\_\_\_\_\_  
Date



NO EPA ID

NO DISCOVERY DATE

NPL Status = O-NOT A VALID SITE OR INCIDENT

Site Name: QuikTrip Store #516R Initiated Date 5/18/00 Initiated By:  Removal  Site Assessment

List Site Alias Name (s): \_\_\_\_\_

Address: 900 East University County Name: Polk

City, State, Zip: Des Moines State ID (if one exists): IA Congressional District: \_\_\_\_\_

NPL Status:  NOT A VALID SITE OR INCIDENT Federal Facility?:  Yes  No

Section:  C-(SACR) Site Assessment/Cost Recovery Branch  L-(EFLR) Enfr/Fund Lead RV Branch  
 F-(FFSE) Federal Facilities/Apecial Emphasis Brnach  M-(MOKS) MO/KS remedial Branch  
 I-(LANE) I/ANE Remedial Branch  O-(ER&R) Emergency Response & RV Branch

Directions to Site: On north side of University between East 9th Street and East 12th Street. Refer to attached map

Site Description: The site was a former Conoco station for approximately 30 years

Site Size: 1.5

Site Dimension:  Acres  Square Feet  Feet  Square Miles  Miles

Site Type:  Disposal  Storage  Midnight Dump  Transportation Related  Other  Treatment  Production Facility (active)  Treatment (active)  Production Facility (inactive)

Owner Operator Type:  Bank/Loan Company  County Owned  District Owned  Federally Owned  Former Federally Owned or Operated  Government Owned/Contractor Operated  Indian Lands  Mixed Ownership  Municipality  Other  Private  Privately Owned/Government Operated  Property Defaulted Back to Government  State Owned  Trustee, Federal  Trustee, State  Unknown

Incident Type:  Non-Oil Spill  Oil Spill  Unknown  
Incident Category:  Abandoned  Fire/Explosion  Chemical Plant  Landfill  City Contamination  Manufacturing Plant  Dioxin  Military Related  Ecological Damage  Other  Federal Facility  Pure Lagoons  Groundwater  Radioactive Site  Housing Area/Farm  Mines/Tailings  Industrial Waste Treatment  Inorganic Waste  Waterways/Creeks/Rivers  Biological Threat  Wells

RCRA Site: \_\_\_\_\_

USGS Quadrant: \_\_\_\_\_ USGS Hydro Unit: \_\_\_\_\_

Operational Status:  Active  Inactive  Unknown

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
Lat/Long Accuracy:  Seconds  Meters  Feet  Kilometers  Miles  1 Degree  Private  
Lat/Long Source:  EPA Region 7  EPIC  Geograph-Historical  Other  Other Fed Agency

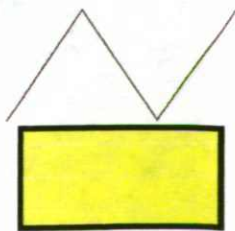
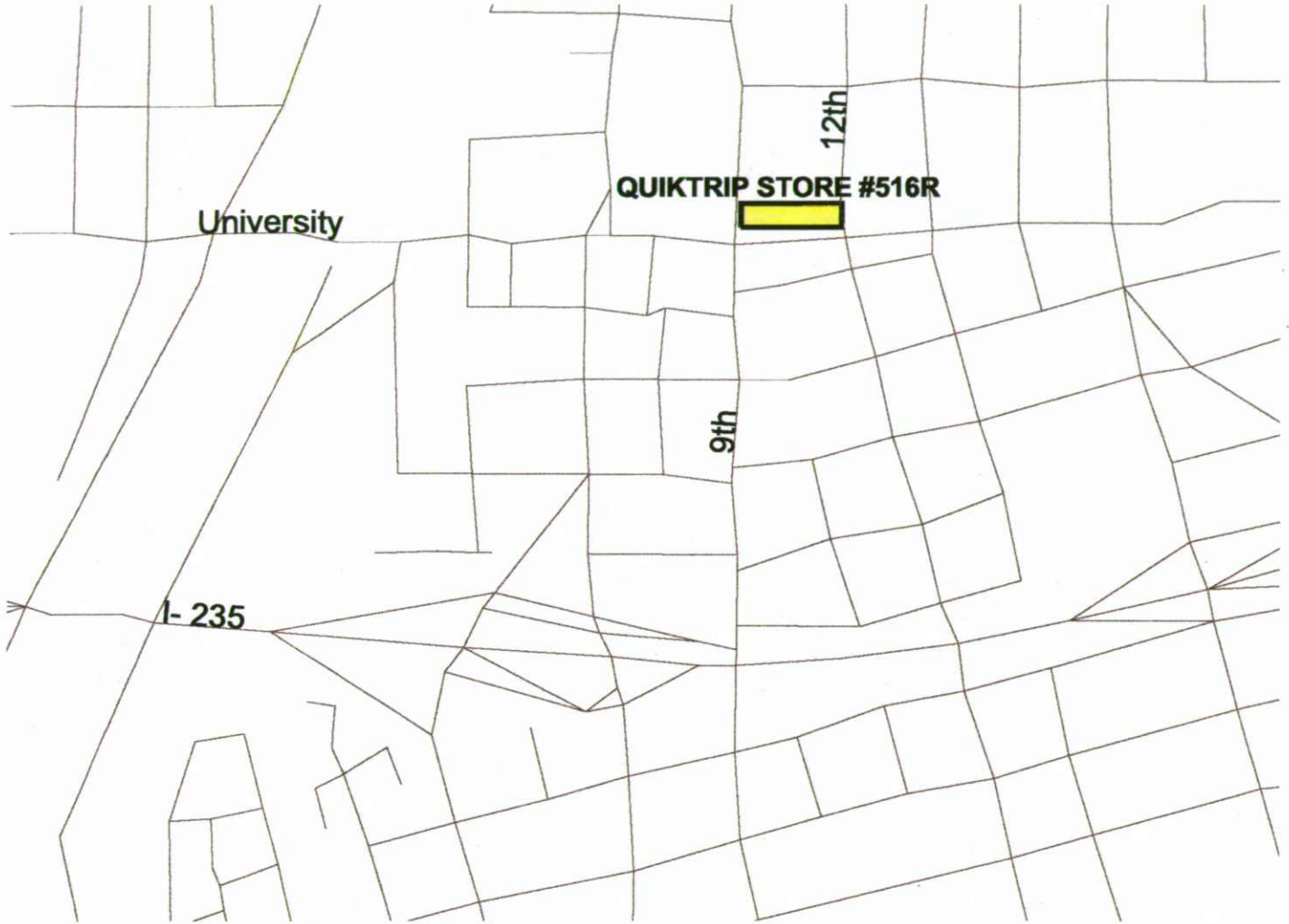
Add Action:  PRE-CERCLIS SURVEYS Planned Complete: 1/1 Actual Complete: 6/9/00 OU 00

Lead code (chose one):  F-EPA Fund Finaced  FF - Federal Facility  S - State, Fund Finaced SCAP Note: \_\_\_\_\_

Comment:  Site or  Action: No further CERCLA Action. Continued oversight under state tank program

Signature: Jah Uedden Date: 6/13/00 RPM/OSC/SAM: \_\_\_\_\_ Date 1/1

# QuikTrip Store #516R

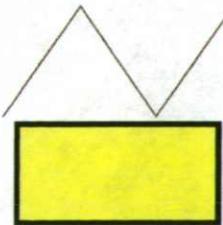


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# QuikTrip Store #516R, Des Moines



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