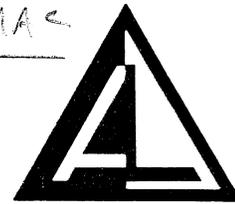
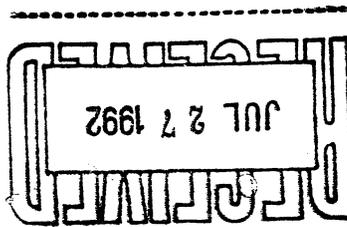


BOEING MAC



**ALLIED  
LABORATORIES**

A DEPARTMENT OF PROFESSIONAL  
ENGINEERING CONSULTANTS, P.A.

## **PHASE 2 ENVIRONMENTAL SITE ASSESSMENT**

### **AFL-CIO SOIL & GROUND WATER EXPLORATION, K-15 & MACAUTHUR ROAD**

**WICHITA, KANSAS**

**Prepared For:**

**AFL-CIO**

**Prepared by:**

**ALLIED LABORATORIES  
Geo-Environmental Division**

**(Draft)**

**A/L File No. 55-92258**

**July 16, 1992**

**ALLIED LABORATORIES**  
(316) 262-6457 • 349 Ida • Wichita, Kansas 67211

**PHASE 2 ENVIRONMENTAL SITE ASSESSMENT**

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**July 16, 1992**

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND

On June 4, 1992, Allied Laboratories was authorized by International Association of Machinists & Aerospace Workers (AFL-CIO) to initiate a limited Phase II environmental investigation at the property located near the southwest corner of K-15 and MacArthur Road, Wichita, Kansas. This investigation was in response to the potential environmental concerns by AFL-CIO and John T. Arnold and Associates, Inc.

It was decided by mutual agreement between AFL-CIO, John T. Arnold and Associates and Allied Laboratories, that John T. Arnold would provide a title and address search of the subject property. Allied was to conduct an aerial photograph review of the subject property and the surrounding area, prior to the start of the field investigation. Once all the requested data was reviewed, Allied proceeded with the limited Phase II study utilizing exploratory borings for data on the underlying soils to the depth of the first ground water encountered. Samples to be collected and analyzed are intended to provide information on the existing soils and ground water conditions, targeting the potential contaminants outlined in our proposal for this project. A permanent ground water monitoring system to monitor future changes in ground water quality was not installed as part of this investigation.

This work was performed under Allied project number 55-92258 in accordance with our proposal dated June 3, 1992, and pursuant to your signed authorization dated June 4, 1992.

## 1.2 SCOPE OF WORK

This investigation consisted of the following items:

- A site specific Health and Safety Plan was prepared for this investigation in accordance with OSHA 1910.120.
- An aerial photograph review was conducted to provide an indication of past property usage and to evaluate potential sampling locations.
- An interview was conducted with the current property owner/representative concerning the previous property usage and areas which may have a direct environmental impact on the property.
- Soil samples were taken from a portion of each of the five borings located on the property. Soil samples were field screened for Volatile Organic Compound (VOC) vapors with a photo-ionization detector (PID). At each location the samples with the highest PID readings were composited into one sample and analyzed for VOCs by EPA Methods 8010 and 8020.
- Soils encountered at all locations were logged in accordance with the Unified Soil Classification System.
- Composite soil samples were obtained at two surface locations by combining 12 to 16 aliquots for each sample. Each aliquot sample was taken from depths of 0 to 12 inches using a stainless steel auger.
- Temporary monitoring wells were installed into the five bore holes to obtain static ground water measurements and to collect ground water samples.
- Ground water samples were analyzed for VOCs by EPA Methods 601 and 602.
- The temporary monitoring wells were pulled and properly abandoned.

This report summarizes the tasks and activities described above.

## 2.0 FIELD INVESTIGATION METHODOLOGY

Five sampling locations (see Figure 3, Appendix A) were selected to determine the potential of soils and ground water contamination. Based on the title search, aerial photograph review and the interview with the previous owners representative, VOC's, Total Petroleum Hydrocarbons (TPH) and Total RCRA Metals were targeted in this investigation.

### 2.1 HEALTH AND SAFETY

The Health and Safety Officer on site initially received 40 hours of OSHA approved hazardous material safety health and training, and participate in annual health and safety training update seminars. This training is in accordance with requirements specified in OSHA 29 CFR 120.

All field work performed during this investigation was in accordance with procedures detailed in the Site Health and Safety Plan. This Safety Plan was prepared for the contaminants targeted in section 2.0 above and is not intended to cover all contamination that may have existed at this site. All personnel working at the site read and followed the safety procedures presented in this Plan, and a signed copy of this document is kept in the project file at Allied.

During field activities, ambient air quality was monitored with a PID. All personnel handling drilling and sampling equipment were equipped in Modified Level D health and safety protection, which includes hard hats, protective glasses and neoprene gloves.

### 2.2 SOIL SAMPLING

Sampling locations discussed in this section are shown on the sample location map (Figure 3, Appendix A).

#### 2.2.1 Boring Soil Sampling

Each boring was advanced with 6-inch diameter continuous flight augers to determine the depth to the first ground water encountered and to sample soils in the unsaturated zone (or vadose zone). During drilling of the exploratory borings (TW-1 through TW-5) grab samples representative of each 3 to 5-foot interval above the ground water were taken off the auger and placed into Zip-Lock plastic bags. The bags were sealed and allowed to volatilize for 10 to 15 minutes. Relative concentrations of VOC vapors were then measured with a PID equipped with an 11.7 Ev lamp. The PID device measures relative VOC levels in parts per million (ppm), and was calibrated to a benzene standard before use. No significant VOC readings were obtained; however, soils from the intervals with the highest PID readings were retained to be composited for chemical analysis. The samples were composited by placing the contents into a stainless steel bowl, mixed and separated into the appropriate laboratory containers. All samples were placed on ice and submitted for chemical analysis. Chain of custody documentation and soil sampling logs are included in Appendix C.

All drill cuttings generated during drilling were placed on plastic sheets and left on site pending analytical results to determine disposal protocol. Soils encountered at all locations were visually examined, and lithologic details were recorded on boring logs in accordance with the Unified Soil Classification System. The boring and well logs are shown in Appendix B of this report.

## 2.2.2 Surface Soil Sampling

A stainless steel sampling auger was used to collect samples from approximately 0 to 12-inches below the surface at two areas on this site (see Figure 3, Appendix A). The sampler was decontaminated with a mixture of deionized water andalconox soap and rinsed in deionized water between each individual sampling location. This provided minimization of cross contamination between samples. At area one, located northeast of TW-3, twelve (12) aliquots were collected on a 10 foot grid pattern in an area approximately 20 feet by 30 feet. Area two, northeast of TW-4, was sampled with sixteen (16) aliquots collected on a 10 foot grid pattern in an area approximately 30 feet by 30 feet. Portions of each aliquot from the respective sampling location were placed in a stainless steel bowl and mixed with a stainless steel spoon. A representative sample from each location was then placed in a laboratory supplied container and stored on ice for preservation.

Both composited aliquot samples were analyzed by Continental Analytical Laboratories and analyzed for TPH (OA-2) and Total RCRA Metals. Analytical results, chain of custody documentation and soil sampling logs are included in Appendix C.

## 2.3 TEMPORARY MONITORING WELL INSTALLATION, SAMPLING AND ABANDONMENT

### 2.3.1 Temporary Monitoring Well Installation

The temporary wells were constructed with 2-inch inside diameter, flush threaded, schedule 40 PVC casing and screen. The wells were screened using a 10 foot .010 inch mill slotted screen from the bottom of the boring. To prevent unauthorized access and to provide protection from outside elements, a locking watertight cap was place in the top of each casing.

The PVC pipe and screen were lowered into the existing bore hole and washed silica sand was added to the annulus space between the bore hole and the screen. A bridging seal was placed at two feet below the surface and the remaining upper annular space was then filled with bentonite chips. This seal prevented any surface waters from entering the bore hole and potentially contaminating the ground water.

### 2.3.2 Ground Water Sampling

On June 17, 1992, each temporary monitoring well, with the exception of TW-5, was purged of approximately all water within the well. Temporary monitoring well TW-5 remained dry throughout this investigation. The slow recharge of the wells prevented the collection of ground water samples on the day of the well installations. On June 18, 1992, a sample of the ground water was collected from within each of the temporary monitoring wells, with the exception of TW-5, using a new disposable polyethylene bailer dedicated to each well. The ground water at each location was measured for temperature, conductivity and Ph. Samples were then placed into laboratory supplied containers for chemical analysis. Analytical results and chain of custody documentation for the ground water samples are included in Appendix C. Sampling logs for the ground water samples are included in Appendix D.

### 2.3.3 Temporary Well Abandonment and Boring Plugging

Once static water levels were measured and ground water samples collected, the bridging seal was removed and the entire well casing and screen was pulled from the bore hole and discarded. Number 10/20 silica sand was placed into the bore hole to above the static water level. Bentonite chips were then placed to within three feet of the ground surface. Drill cuttings were added to the boring to the surface and compacted. Well plugging procedures are in accordance with KDHE regulations.

## **2.4 DECONTAMINATION PROCEDURES**

The drill rig and all flight augers were cleaned with a high pressure steam cleaner prior to use and between each sampling location. All sampling equipment was cleaned with a mixture of water and Alconox detergent and rinsed with deionized water prior to use and between each sampling event.

## 3.0 FIELD INVESTIGATION RESULTS

### 3.1 CLIENT/REPRESENTATIVE INTERVIEW

The client/representative interview indicated that there had been a concrete batch plant on the subject property approximately 17 years ago. Since that time the property has been vacant, however, occasional unauthorized dumping occurred during this period. The current owner has removed the majority of the dumped debris from the property.

### 3.2 AERIAL PHOTOGRAPH REVIEW

Eight aerial photographs were reviewed of the subject property, spanning the years from 1938 through 1989. The 1938 and 1950 photographs indicate a farm house with outbuildings on the subject property. In the 1968 photograph the farm house was gone and the concrete batch plant with a road and parking area exists. The photograph taken in 1983 indicates that the batch plant is gone and the road and parking areas were covered with vegetation. The remaining photographs did not show any additional structures; however, vehicle paths throughout the property and areas of unidentifiable material support the owners representative's report that unauthorized dumping occurred on the property.

### 3.3 FIELD OBSERVATIONS

The size of the property is approximately 18 acres with heavily wooded areas along the east and south sides and a moderate tree cover throughout the central portion. Limited drill rig access was taken into consideration for choosing sampling locations. A small surface depression, approximately 10 to 15 feet in diameter and 4 feet deep, was observed near the central portion of the site, approximately 20 feet northeast of TW-3. At the time of this investigation this hole contained water with a small amount of debris, including plastic oil containers. A second and smaller hole was observed in the heavily wooded area in the northeast portion of the site. The smaller hole did not contain water.

The adjacent property immediately surrounding the subject site consists of residential housing to the south, a mobile home park to the west, a lumber company to the north and railroad property to the east.

### 3.4 GEOLOGY

Silty and sandy clay with clayey sand and gravel seams were encountered above the Wellington Formation at this site. The top of the weathered surface of the Wellington Formation was encountered at a depth of approximately 22 feet at boring TW-1, which was drilled in the lower portion of the property. The saturated thickness of the clayey sand and gavel varied between each boring at this property and ranged from a few inches to 2 feet thick.

### 3.5 HYDROGEOLOGY

Saturated clayey sand and gravel were encountered between 9.5 feet and 23 feet below the surface at the boring locations. Ground water elevations and flow directions were not determined within the scope of this investigation; however, temporary monitoring wells enabled access to collect ground water samples and to measure the static ground water levels. The measurements were taken with an electronic water level indicator.

### 3.6 PID RESULTS

Soil samples taken from all sampling locations showed either non-detectable or no significant VOC vapor concentrations as measured with the PID. PID values for the samples submitted for analysis are shown on the boring logs in Appendix B. Because PID values were virtually non-detected for each soil interval, soil sample intervals representing the highest PID readings were composited into one sample and submitted for chemical analysis.

## 4.0 LABORATORY ANALYSIS

All samples obtained during this investigation for laboratory analysis were placed in containers supplied by the Analytical Laboratory and preserved on ice. These samples were shipped by express delivery under chain of custody documentation to Continental Analytical Services in Salina, Kansas for analysis.

### 4.1 SOIL SAMPLE ANALYSIS

#### 4.1.1 Boring Soil Analysis Results

A composite soil sample was obtained from a portion of each of the five exploratory borings, representing the soils with the highest PID readings at this site. These samples were submitted for analysis of Volatile Organic Compounds (chlorinated hydrocarbons and some petroleum compounds) in accordance with EPA Methods 8010 and 8020.

Constituents from these analyses with detectable amounts are shown on the following table:

CONSTITUENTS DETECTED	SOIL SAMPLING LOCATIONS (Samples collected 6/17/92)				
	TW-1	TW-2	TW-3	TW-4	TW-5
1,2 Cis-Dichloroethylene	ND(1)	ND(1)	ND(1)	2.7	ND(1)
Trichloroethylene	ND(1)	ND(1)	ND(1)	31	ND(1)

All constituents measured in parts per billion.  
ND - Non-detectable with detection limits in parentheses

The complete list of analytical results from Continental Analytical Services, Inc. are presented in Appendix C of this report.

#### 4.1.2 Surface Soil Analysis Results

Composite samples were obtained from the near surface soils at two locations on site representing areas of previous activities that could have an environmental impact. These samples were submitted for analysis of total petroleum hydrocarbons by the OA-2 procedure (heavier distillates); and total RCRA metals.

Constituents from these analysis with detectable amounts are shown on the following table:

CONSTITUENTS DETECTED	ALIQUOT SAMPLE LOCATION (Sample collected 6/17/92)		
	12 Aliquot (Near TW-3)	16 Aliquot (Near TW-4)	* Trace elements common in soils
Semi-volatile Petroleum Hydrocarbon	ND(20)	36	N/A
Arsenic, Total	7	3	0.1 - 40
Barium, Total	150	140	100 - 3500
Cadmium, Total	ND(0.5)	0.9	0.01 - 7.0
Chromium, Total	11	10	5.0 - 3000
Lead, Total	11	30	2.0 - 200

All constituents measured in parts per million (mg/kg).  
 ND - Non-detectable with detection limits in parentheses  
 N/A - Not Applicable  
 \* Published in March/April 1988 HMC.

The complete list of analytical results from Continental Analytical Services, Inc. are presented in Appendix C of this report.

## 4.2 GROUND WATER SAMPLE ANALYSIS

### 4.2.1 Ground Water Analysis Results

Samples of ground water obtained in the investigation representing the first ground water encountered were submitted for analysis of Volatile Organic Compounds (chlorinated hydrocarbons and some petroleum compounds) in accordance with EPA Methods 601 and 601.

Constituents from this analysis with detectable amounts are shown on the following table:

CONSTITUENTS DETECTED	GROUND WATER SAMPLES (Samples collected on 6/18/92)					KNL/KAL
	TW-1	TW-2	TW-3	TW-4	TW-5	
1,2 Cis-Dichloroethylene	34	84	35	130	NT	7/70
Trichloroethylene	860	1500	610	1200	NT	.5/5

All constituents measured in parts per billion.

KNL - Kansas Notification Level      KAL - Kansas Action Limits

NT - Not Tested (no water in well)

The complete list of analytical results from Continental Analytical Services, Inc. are presented in Appendix C of this report.

## 5.0 CONCLUSIONS

- The client interview indicated that there has been unauthorized dumping on the subject property in the past. The current owner has removed the majority of the dumped debris from the property.
- The aerial photograph review indicated that most of the western and southern portions of the subject property has been either cultivated farm ground or areas of scattered heavy tree coverage. The only structures observed in the aerial photo review to have existed on the site were the farm house and the concrete batch plant, which were located in the central eastern portion of the property. No structures currently exist on the property.
- Composite near surface soils analyses for the eight RCRA metals (total) were within the range of common occurrence of trace elements in soils (March/April 1988 HMC publication).
- Trichloroethylene and 1,2 Cis-Dichloroethylene were found in the soil boring sample obtained from boring TW-4.
- Trichloroethylene was found to exceed the Kansas Action Limits (KAL) for drinking water in each of the ground water samples analyzed. 1,2 Cis-Dichloroethylene was found to exceed the Kansas Notification Limits (KNL) in each of the ground water samples analyzed and the KAL in samples from TW-2 and TW-4.

## 6.0 RECOMMENDATIONS

- For verification of a benchmark to the current conditions, we recommend that you provide a copy of this report to the Kansas Department of Health and Environment.

KDHE  
Mr. Stan Marcotte  
1919 Amidon, Suite 130  
Wichita, Kansas 67203

- The soils generated during drilling activities and placed on plastic sheeting may be reused or disposed using any method.

## 7.0 LIMITATIONS

The data contained in this report is not intended to guarantee that a site is or is not free from conditions, materials or substances which could adversely impact the environment or pose a threat to public health and safety. It is intended to address the historical and physical characteristics of the site with regard to the release or presence of hydrocarbons, hazardous materials or other contaminants. It is to be used as a summary of existing conditions, the conclusions of which are based upon reasonable and knowledgeable review of evidence found in accordance with State and Federal protocols, and within the budgetary constraints imposed in the contract between Allied Laboratories and International Association of Machinists & Aerospace Workers (AFL-CIO). Should further research on the site be conducted, the additional data should be reviewed by Allied Laboratories, so the conclusions presented herein may be modified.

This report has been prepared on behalf of and for the exclusive use of International Association of Machinists & Aerospace Workers solely for use in an environmental evaluation of the subject site. As a mutual protection to you, as our client, the public, and ourselves, authorization for publication of statements, conclusions or extracts from or regarding this report is reserved pending our written approval. Allied Laboratories acknowledges and agrees, however, that the report may be conveyed to the Buyer, Lender, and Title Insurance Company associated with the proximate financial transactions concerning the site.

Conclusions stated herein refer only to the specific site at the time of the investigation. Allied Laboratories assumes that the data obtained and the inferences made in the course of the investigation are reasonably representative of the property. We make no warranty, expressed or implied, except that our services have been performed in accordance with generally accepted existing environmental engineering, health and safety principles, and applicable regulations at the time and location of the study. Allied Laboratories has analyzed the available information using what we believe to be current applicable engineering techniques.

If there should be any question arise from reviewing this report, please feel free to contact our office at your convenience.

Very truly yours,

ALLIED LABORATORIES

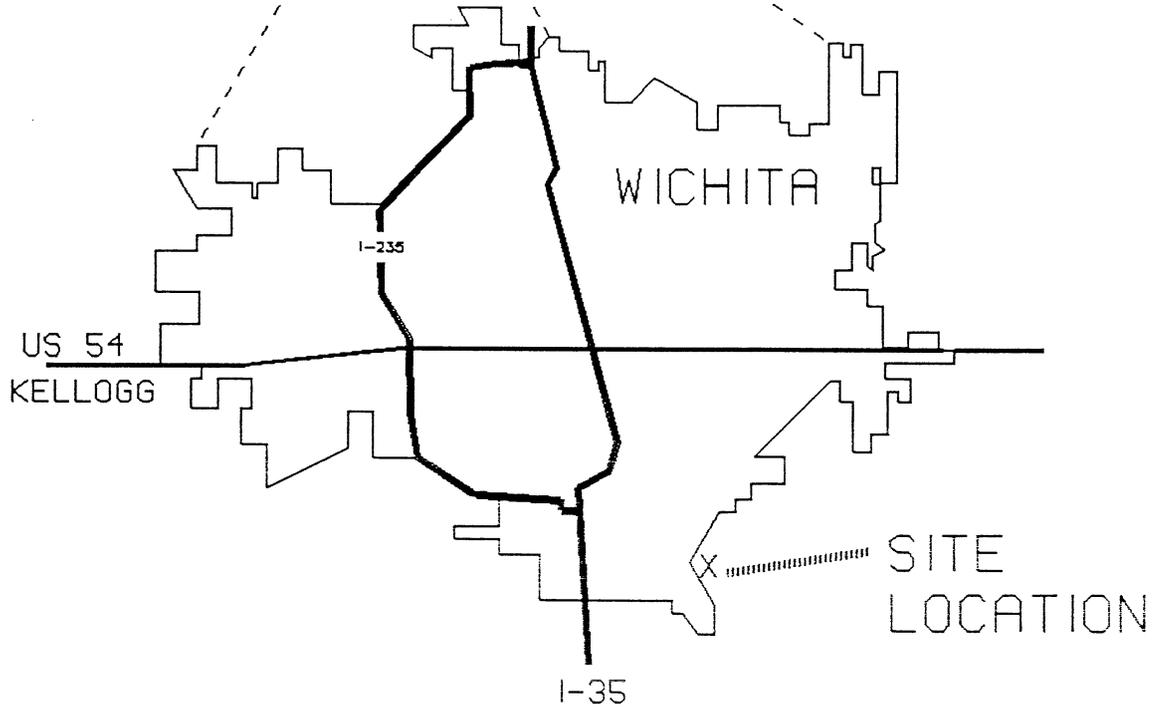
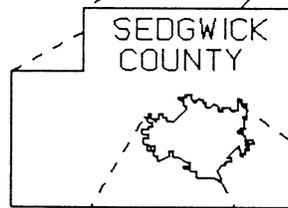
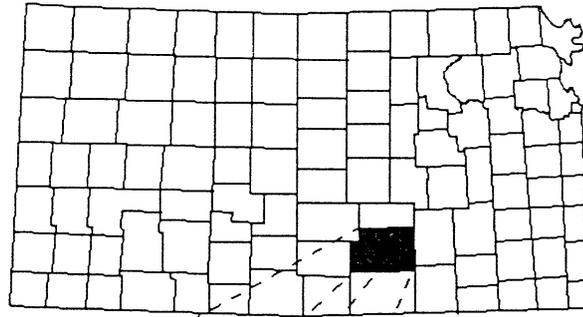
Richard J. Elgin  
Environmental Geologist

Reviewed by:

Richard L. Luke, CPG  
Manager, Geo-Environmental Division

APPENDIX A

# KANSAS



Allied Laboratories  
A Department of  
Professional Engineering Consultants, P. A.  
Geo-Environmental Division  
366 Ellis  
Wichita, KS 67211

TITLE: SITE AREA MAP  
PROJECT NAME: AFL-CIO GW/SOIL EXPLORATION  
PROJECT NO.: 55-92258  
PROJECT LOCATION: K-15 AND MACARTHUR ROAD  
PREPARED FOR: AFL-CIO  
DATE: 6/22/92 REVISED: FIG. NO.: 1

MACARTHUR ROAD

BOEING

RAILROAD

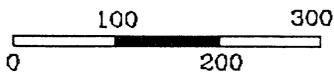
EAGLEWOOD

SITE  
LOCATION

K-15



SCALE - IN FEET



ALLIED LABORATORIES  
A Department of Professional  
Engineering Consultants, P.A.  
GEO-ENVIRONMENTAL DIVISION  
365 S. Ellis  
Wichita, Kansas 67211

FIGURE TITLE: SITE LOCATION MAP  
PROJECT NAME: AFL-CIO GW/SOIL INVESTIGATION  
PROJECT NUMBER: 55-92258  
PROJECT LOCATION: K-15 AND MACARTHUR ROAD  
PREPARED FOR: AFL-CIO  
DATE: 6/22/92 REVISED:  
Drawn by: Richard J. Elgin

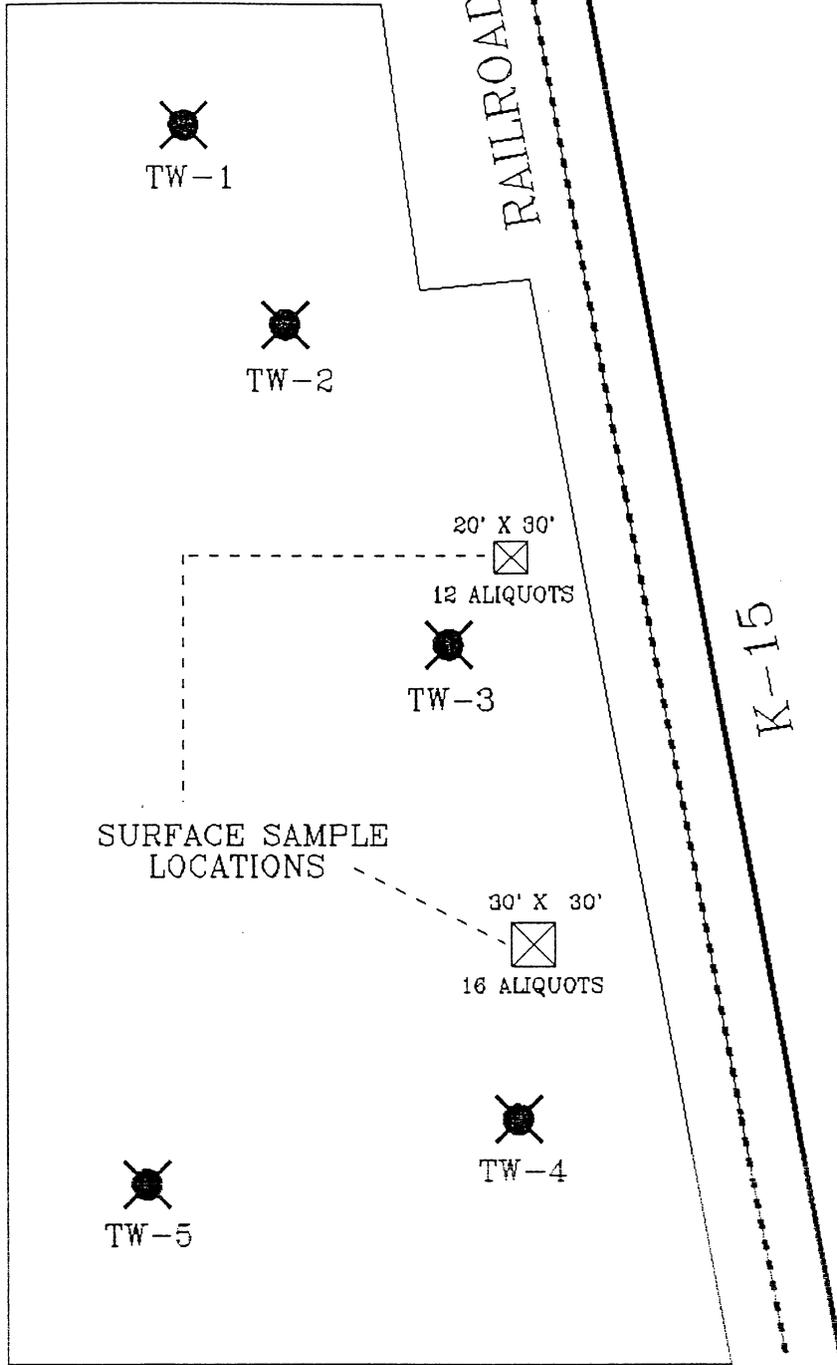
FIGURE NUMBER: 2

MACARTHUR ROAD

EAGLEWOOD

RAILROAD

K-15

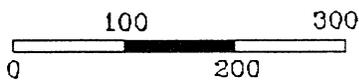


- Temporary Well Location and Number



- Surface Soil Sampling Locations

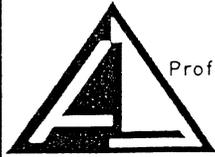
SCALE - IN FEET



ALLIED LABORATORIES  
 A Department of Professional  
 Engineering Consultants, P.A.  
 GEO-ENVIRONMENTAL DIVISION  
 355 S. Ellis  
 Wichita, Kansas 67211

FIGURE TITLE: BORING AND SAMPLING LOCATION MAP  
 PROJECT NAME: AFL-CIO GW/SOIL INVESTIGATION  
 PROJECT NUMBER: 55-92258  
 PROJECT LOCATION: K-15 AND MACARTHUR ROAD  
 PREPARED FOR: AFL-CIO  
 DATE: 8/22/92 REVISED:  
 Drawn by: Richard J. Elgin  
 FIGURE NUMBER: 3

APPENDIX B



Allied Laboratories  
 Department of  
 Professional Engineering Consultants, P.A.  
 Geo-Environmental Division  
 355 Ellis  
 Wichita, Kansas 67211

**WELL LOG**

Project No.: 92258-1 Logged By: RJE

Project Name: AFL-CIO Groundwater/Soils

Date Drilled: 6-17-92

Date Completed: 6-18-92

Bore Hole Diameter: 6"

Initial Water Level: 12.1

DEPTH (ft.)	Well Construction Diagram	SAMPLE No./PID	Lithologic Symbol	Soil Description/Lithology
0		1 2.0		TOP TW-1
				SILTY CLAY, dark brown to light brown, elastic, very moist to moist, dry white caliche at 4.0'
5				SANDY CLAY, light brown, moist, limestone fragments at 7.5'
10				SOIL GRAB SAMPLE
				SANDY CLAY, light brown, stiff, moist
15				SANDY CLAY, light brown, soft, wet to saturated
20			LIMESTONE, hard BOTTOM TW-1	
25				
30				
35				

**SAND PACK**

Type: silica

Size: 10/20

Top Depth: 7.0

Bottom Depth: 19.0

**SEAL**

Type: bridge

Top Depth: 2.0

Material: bentonite

Bottom Depth: 3.0

**CASING**

Diameter: 2"

Material: PVC

Stick Up: 1.0

Bottom Depth: 8.0

**SCREEN**

Diameter: 2"

Slot Size: .010

Material: PVC

Top Depth: 8.0

Bottom Depth: 19.0

**GROUT TYPE:** \_\_\_\_\_

bentonite

**PROTECTIVE COVER TYPE:** locking

cap

**COMMENTS:**

Temporary Well

\* Note: All measurements in Depth below land surface.



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 Geo-Environmental Division  
 355 Ellis  
 Wichita, Kansas 67211

**WELL LOG**

Project No.: 92258-1 Logged By: RJE

Project Name: AFL-CIO Groundwater/Soils

Date Drilled: 6-17-92

Date Completed: 6-18-92

Bore Hole Diameter: 6"

Initial Water Level: 17.46

DEPTH (ft.)	Well Construction Diagram	SAMPLE No./PID	Lithologic Symbol	Soil Description/Lithology
0		2 1.5		TOP TW-2
				SILTY CLAY, dark brown to reddish brown, very moist
5				SILTY CLAY, light brown, dry white caliche at 5.0'
				SOIL GRAB SAMPLE
10				SILTY CLAY, stiff, limestone fragments at 9.5' and 12.0'
15				SANDY CLAY, light brown, limestone fragments, soft and saturated at 18-20'
20	BOTTOM TW-2			
25				
30				
35				

**SAND PACK**

Type: silica

Size: 10/20

Top Depth: 8.0

Bottom Depth: 23.0

**SEAL**

Type: bridge

Top Depth: 2.0

Material: bentonite

Bottom Depth: 3.0

**CASING**

Diameter: 2"

Material: PVC

Stick Up: 1.0

Bottom Depth: 13.0

**SCREEN**

Diameter: 2"

Slot Size: .010

Material: PVC

Top Depth: 13.0

Bottom Depth: 23.0

**GROUT TYPE:** bentonite

**PROTECTIVE COVER TYPE:** locking cap

**COMMENTS:**  
Temporary Well



Allied Laboratories  
 Department of  
 Professional Engineering Consultants, P.A.  
 Geo-Environmental Division  
 355 Ellis  
 Wichita, Kansas 67211

**WELL LOG**

Project No.: 92258-1 Logged By: RJE

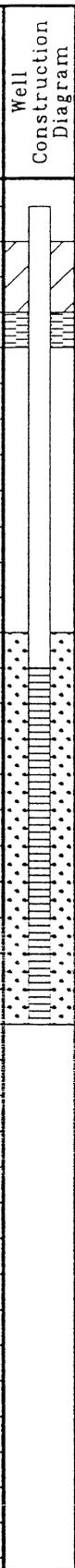
Project Name: AFL-CIO Groundwater/Soils

Date Drilled: 6-17-92

Date Completed: 6-18-92

Bore Hole Diameter: 6"

Initial Water Level: 16.2

DEPTH (ft.)	Well Construction Diagram	SAMPLE No./PID	Lithologic Symbol	Soil Description/Lithology
0				TOP TW-3
				SILTY CLAY, dark brown, gravel, moist
5				SILTY CLAY, light brown, firm, moist, dry white caliche at 7.0'
10				SILTY CLAY, light brown, sandy, gravel, soft to stiff
15		3 1.0		SOIL GRAB SAMPLE
20				SANDY CLAY, light brown, wet to saturated
25				BOTTOM TW-3
30				
35				

**SAND PACK**

Type: silica

Size: 10/20

Top Depth: 11.0

Bottom Depth: 22.0

**SEAL**

Type: bridge

Top Depth: 2.0

Material: bentonite

Bottom Depth: 3.0

**CASING**

Diameter: 2"

Material: PVC

Stick Up: 1.0

Bottom Depth: 11.0

**SCREEN**

Diameter: 2"

Slot Size: .010

Material: PVC

Top Depth: 11.0

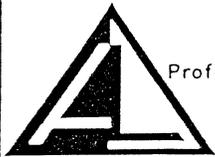
Bottom Depth: 22.0

**GROUT TYPE:** bentonite

**PROTECTIVE COVER TYPE:** locking cap

**COMMENTS:**  
Temporary Well

\* Note: All measurements in Depth below land surface.



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 Wichita, Kansas 67211

**WELL LOG**

Project No.: 92258-1 Logged By: RJE

Project Name: AFL-C10 Groundwater/Soils

Date Drilled: 6-17-92

Date Completed: 6-18-92

Bore Hole Diameter: 6"

Initial Water Level: 4.8

DEPTH (ft.)	Well Construction Diagram	SAMPLE No./PID	Lithologic Symbol	Soil Description/Lithology
0		4 1.0		TOP TW-4
				SILTY CLAY, dark brown to light brown, very moist, plastic
5				
				SILTY CLAY, yellowish light brown, limestone fragments at 6.0' and 9.0', wet to saturated at 13.0'
10				SOIL GRAB SAMPLE
15				
20				BOTTOM TW-4
25				
30				
35				

**SAND PACK**

Type: silica

Size: 10/20

Top Depth: 7.0

Bottom Depth: 18.0

**SEAL**

Type: bridge

Top Depth: 2.0

Material: bentonite

Bottom Depth: 3.0

**CASING**

Diameter: 2"

Material: PVC

Stick Up: 1.0

Bottom Depth: 8.0

**SCREEN**

Diameter: 2"

Slot Size: .010

Material: PVC

Top Depth: 8.0

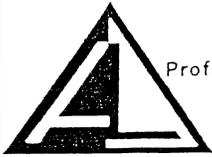
Bottom Depth: 18.0

**GROUT TYPE:** bentonite

**PROTECTIVE COVER TYPE:** locking cap

**COMMENTS:**  
Temporary Well

\* Note: All measurements in Depth below land surface.



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**WELL LOG**

Project No.: 92258-1 Logged By: RJE

Project Name: AFL-CIO Groundwater/Soils

Date Drilled: 6-17-92

Date Completed: 6-18-92

Bore Hole Diameter: 6"

Initial Water Level: Dry

DEPTH (ft.)	Well Construction Diagram	SAMPLE No./PID	Lithologic Symbol	Soil Description/Lithology
0		5 0.0		TOP TW-5
				SILTY CLAY, dark brown to light brown, soft, moist
5				
				SILTY CLAY, sandy, dark brown, damp, iron staining at 13.0' and 18.0'
10				
15				
20				
				SILTY CLAY, sandy, gravel, soft, damp
25				SOIL GRAB SAMPLE
				BOTTOM TW-5
30				
35				

**SAND PACK**

Type: silica

Size: 10/20

Top Depth: 17.0

Bottom Depth: 28.0

**SEAL**

Type: bridge

Top Depth: 2.0

Material:  bentonite

Bottom Depth: 3.0

**CASING**

Diameter: 2"

Material: PVC

Stick Up: 1.0

Bottom Depth: 18.0

**SCREEN**

Diameter: 2"

Slot Size: .010

Material: PVC

Top Depth: 18.0

Bottom Depth: 28.0

**GROUT TYPE:** bentonite

**PROTECTIVE COVER TYPE:** locking cap

**COMMENTS:**  
Temporary Well