

# Old Rinchem Site Investigation Update

Prepared by:

Rinchem Company, Inc.  
6133 Edith NE  
Albuquerque, New Mexico  
Phone: (505) 344-9006

April 14, 1995

*Meeting 4/14/95  
@ RCI*



WE DO IT WELL ... BECAUSE WE CARE

Agenda  
Rinchem-NMED Meeting ,4/14/95, The Old Rinchem Site

1. Introduction (15 min.)
  - a. Who is Rinchem, and what is our commitment.
  - b. Areas of agreement.
  - c. Objectives of the meeting.
2. Rinchem's Presentation (30 min.)
  - a. History of the site.
  - b. Geology and hydrology.
  - c. Current site investigations.
  - d. Investigations yet to be conducted.
3. NMED Presentation (1 hour)
  - a. Site conditions and data interpretation.
  - b. What is needed to complete site investigation and remediation.
4. Discussion (45 min.)
5. Summary (15 min.)

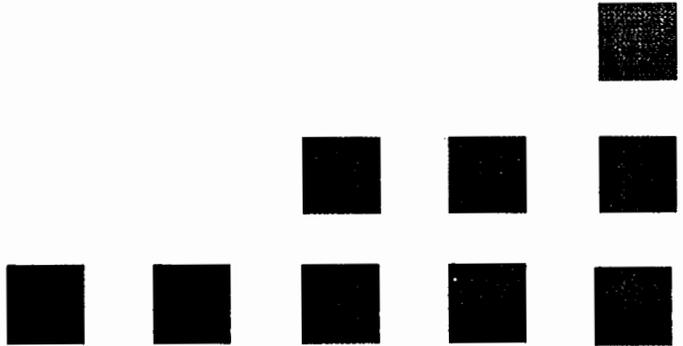


# Rinchem Company, Inc.

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## Rinchem's Vision:

Rinchem Company, Inc. is a world class provider of environmental services..... in the making. What we are now is excellent. What we are becoming is *infinitely* and *inconceivably* better.





## Rinchem Company, Inc.

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### Founded:

- ◇ 1976 Albuquerque
- ◇ Two People
- ◇ To distribute industrial chemicals

### Purchased - 1983

### Currently: 80+ People

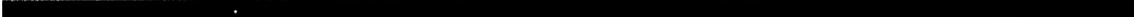
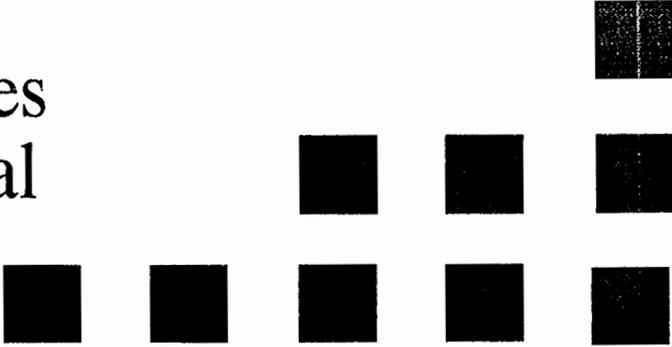
- ◇ Albuquerque
  - ◇ Chaparral (El Paso)
  - ◇ Juarez, Mexico
  - ◇ Sandia National Laboratories
  - ◇ Dugway Proving Ground (Utah)
  - ◇ American Fork (Utah)
- 
- 



# Rinchem Company, Inc.

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## Seven Environmental Services

- ◇ Chemical Distribution
  - ◇ Public Warehousing
  - ◇ Chemical & Waste Transportation
  - ◇ Waste Stream Management
  - ◇ Technical Services/Environmental Restoration
    - Pollution Prevention
    - Urgent Site Response
    - Chronic Site Response
  - ◇ Comprehensive Chemical Services
  - ◇ Health, Safety and Environmental Training
- 
- 
- 

4

## BASIC ASSUMPTIONS

1. There is chlorinated solvent groundwater contamination under and around the Old Rinchem Site.
2. Because of Rinchem's use of the property from 1976 to 1983 for storage of hazardous materials and waste, Rinchem is by definition a Potentially Responsible Party.



## BASIC ASSUMPTIONS (continued)

3. Some level of threat to public health does exist and the site must be assessed to determine appropriate response to the threat.
4. Rinchem has consistently expressed and demonstrated commitment to finance and conduct an investigation and study the alternatives.





6

## BASIC ASSUMPTIONS (continued)

5. Rinchem has developed a work plan and expended approximately \$200,000 in implementing the plan.
6. Rinchem has made its plans and results known to the regulatory community. The regulatory processes that were initiated when the site was officially proposed for inclusion on the National Priority List have precluded regulators from technical guidance or support and from informal cooperation.





## BASIC ASSUMPTIONS (continued)

7. The ranking of this half acre as one of the nation's premier uncontrolled and abandoned hazardous waste sites is caused by assigning unsupported values to Hazard Ranking System factors. The use of these unsupported data forces the process down the same lengthy, costly path as if the site had been a huge chemical landfill.



## Agenda

### 1. INTRODUCTION

- WHO IS RINCHEM AND WHAT IS OUR COMMITMENT
- AREAS OF AGREEMENT
- OBJECTIVES OF THE MEETING

### 2. RINCHEM COMPANY, INC. PRESENTATION:

- HISTORY OF THE SITE
- GEOLOGY AND HYDROLOGY
- CURRENT INVESTIGATIONS
- INVESTIGATIONS YET TO BE CONDUCTED

### 3. NEW MEXICO ENVIRONMENT DEPARTMENT PRESENTATION:

- SITE CONDITIONS AND DATA INTERPRETATIONS
- WHAT IS NEEDED TO COMPLETE INVESTIGATION AND REMEDIATION

### 4. DISCUSSION

### 5. SUMMARY



## MEETING OBJECTIVES

- \* BRING EVERYONE UP-TO-DATE ON THE OLD RINCHEM SITE
- \* IDENTIFY NMED'S CONCERNS WITH THE OLD RINCHEM SITE
- \* REACH AN UNDERSTANDING OF WHAT IS NEEDED TO COMPLETE THE SITE INVESTIGATION AND REMEDIATION
- \* OBTAIN A COMMITMENT FOR COMMUNICATION ON ISSUES WHICH ARE NOT RESOLVED



# OLD RINCHEM SITE

- \* **Site Orientation**
- \* Site Hydrology
- \* Site Investigations
- \* Further Investigations



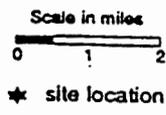
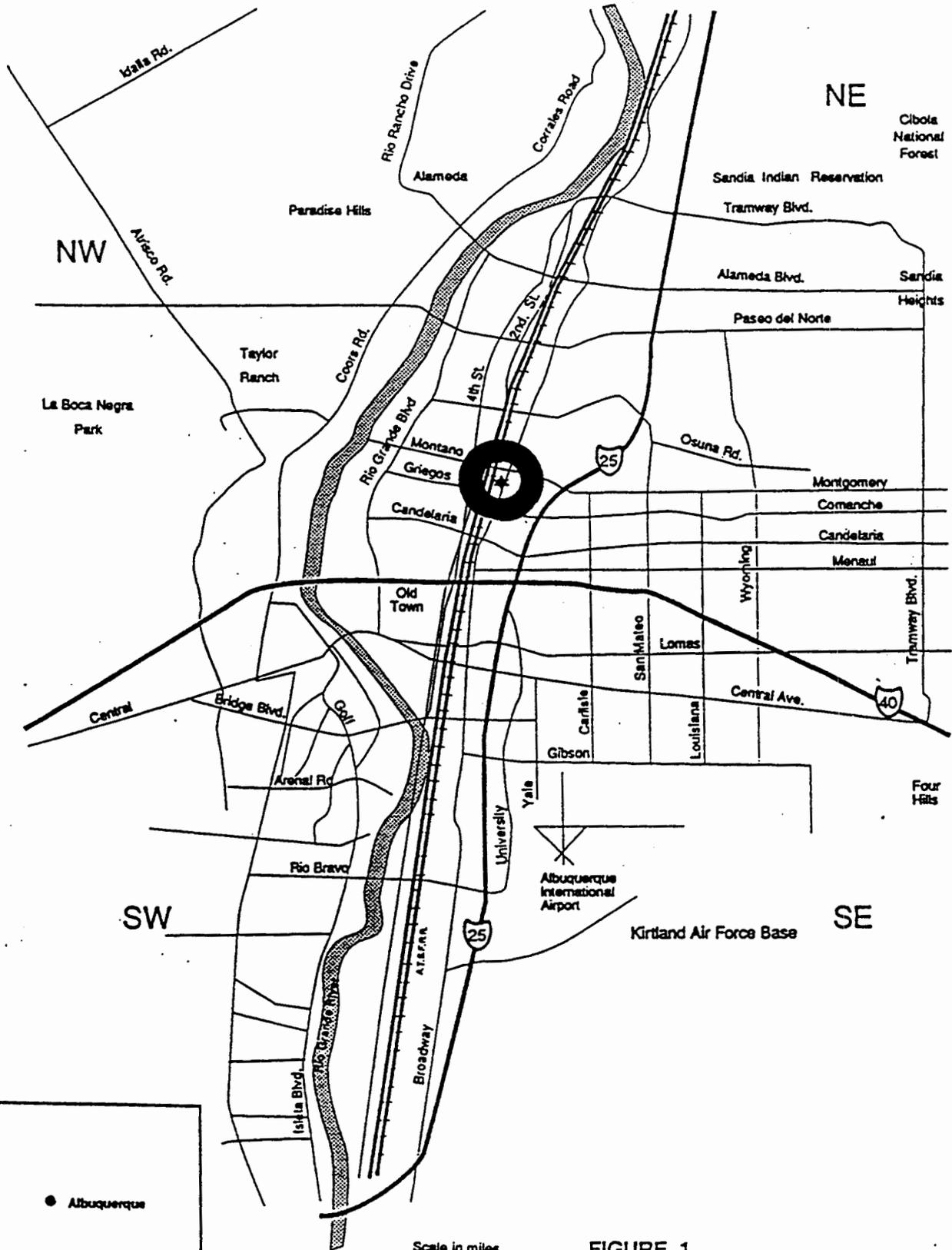
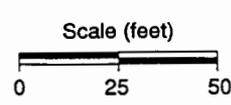
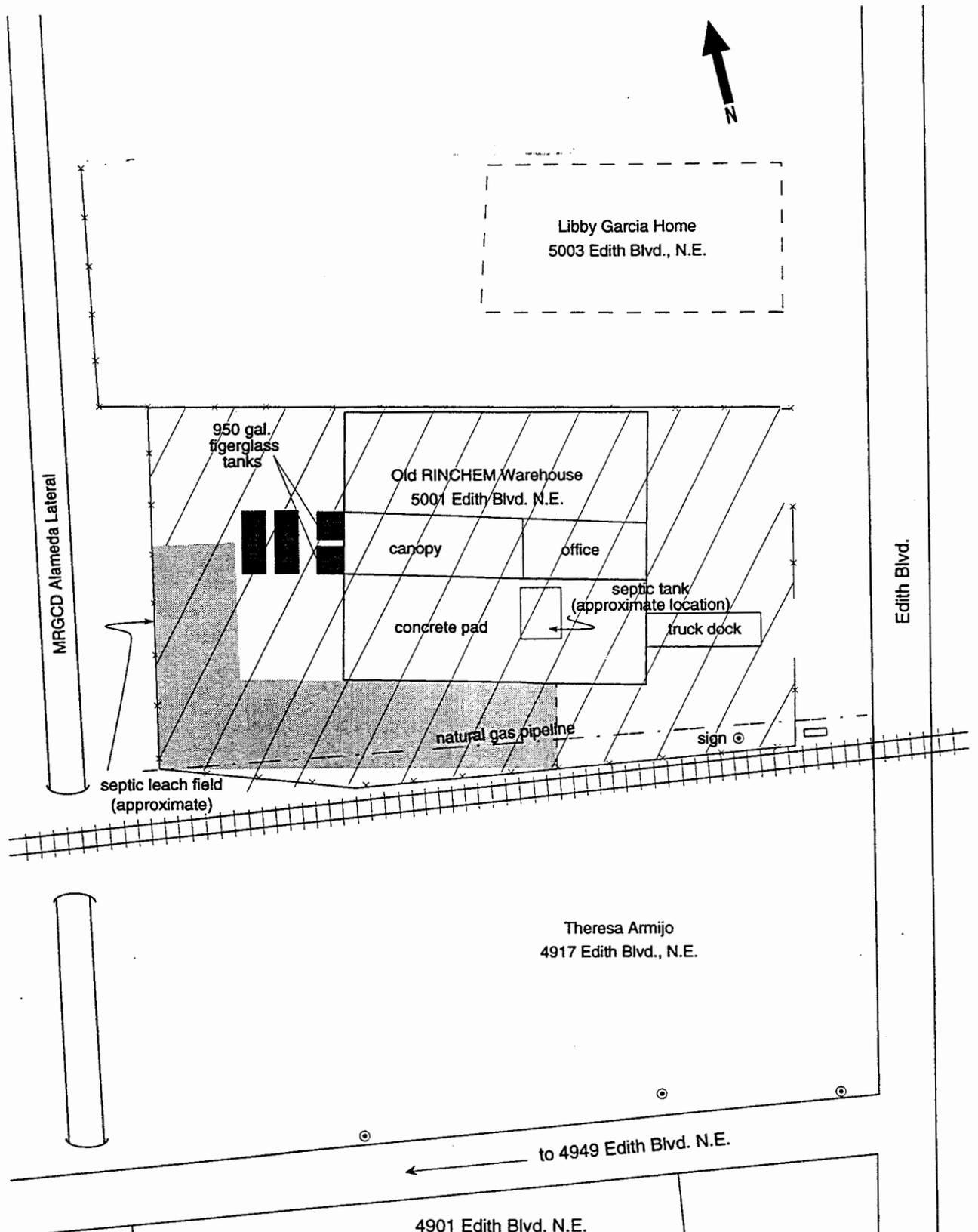


FIGURE 1

Site Location Map
Rinchem Old Site
Billings & Associates, Inc. June, 1993



○ pole location

 septic leach field  
 site as leased and operated by RINCHEM CO. from 1976-1983

**FIGURE 2**

<b>Rinchem Old Site 1984</b>
Rinchem Old Site
Billings & Associates, Inc. May, 1993

## CHRONOLOGY OF PROPERTY USE

- 1940 - 1976: Various Industries including
- \* Electronics Assembly
  - \* Hydraulics
- 1976 - 1983: Rinchem
- \* Site well "contaminated"
  - \* No documented release of halogenated solvents
  - \* Waste transfer station
- 1984 - 1995: Janco Sheet Metal
- \* Corrugated steel fabrication



## CHRONOLOGY OF REGULATORY INVOLVEMENT

- 1983:            Rinchem requests EPA assistance  
                  \*    Certify clean
- 1984            State inspections  
                  \*    Soil samples  
                  \*    Well sample  
                  \*    Poor quality of water in area
- 1988:            State inspection  
                  \*    install wells and soil borings  
                  \*    analyze soil and water samples  
                  \*    hazard ranking
- 1992:            Proposed for NPL



# OLD RINCHEM SITE

- \* Site Orientation
- \* **Site Hydrology**
- \* Site Investigations
- \* Further Investigations



## BASIS FOR UNDERSTANDING SITE HYDROGEOLOGY

Wells: 13 installed and monitored

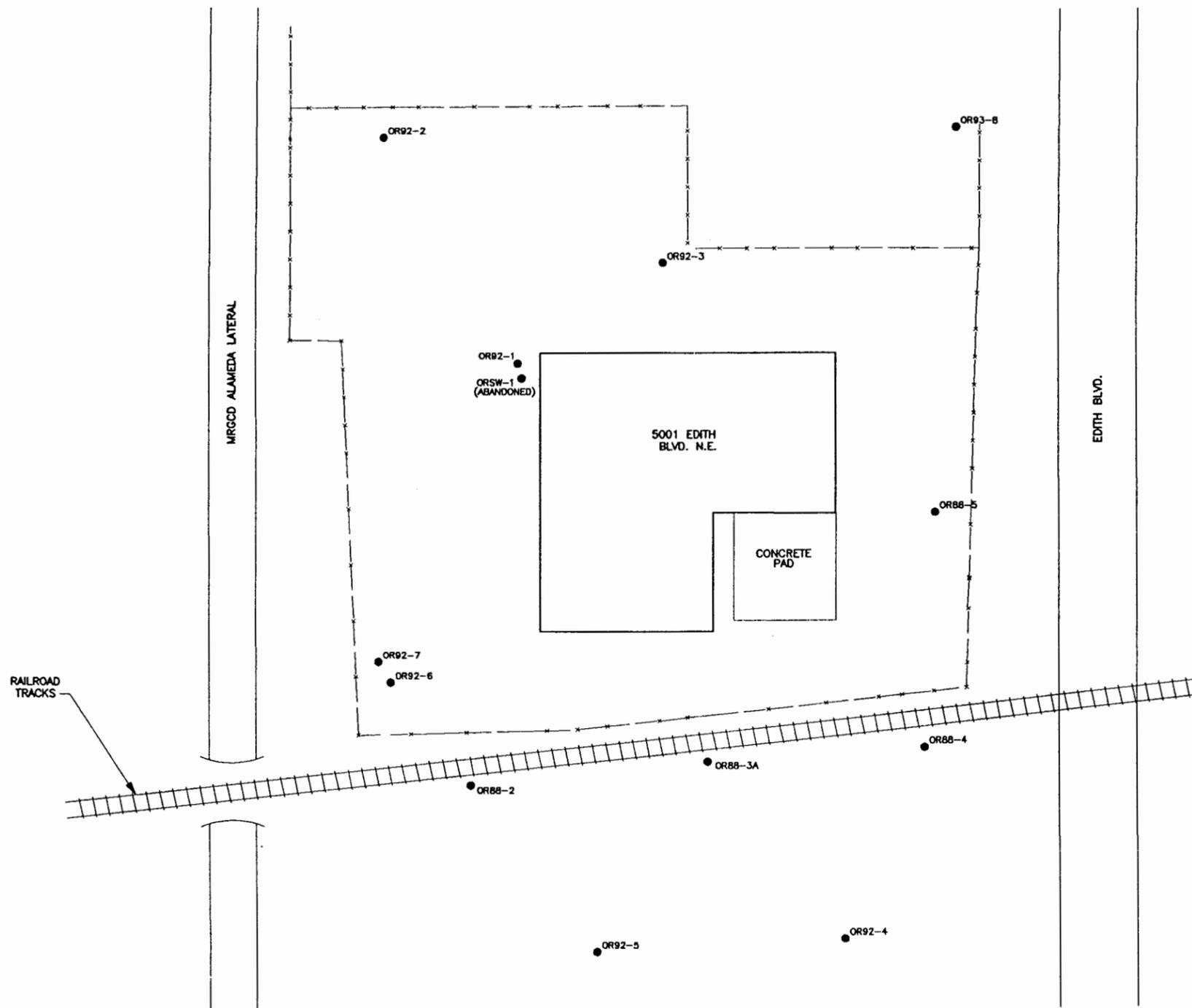
- \* Sampled semiannually since 1992
- \* CLP Laboratory Quality
- \* Split samples with NMED
- \* Water level monitoring

Soil Borings: 45 borings drilled, 79 samples analyzed

- \* Soil samples
- \* Surface to 50 feet



DRAWING NUMBER  
94-164-E3



**LEGEND:**

OR88-4 ● MONITORING WELL LOCATION AND DESIGNATION

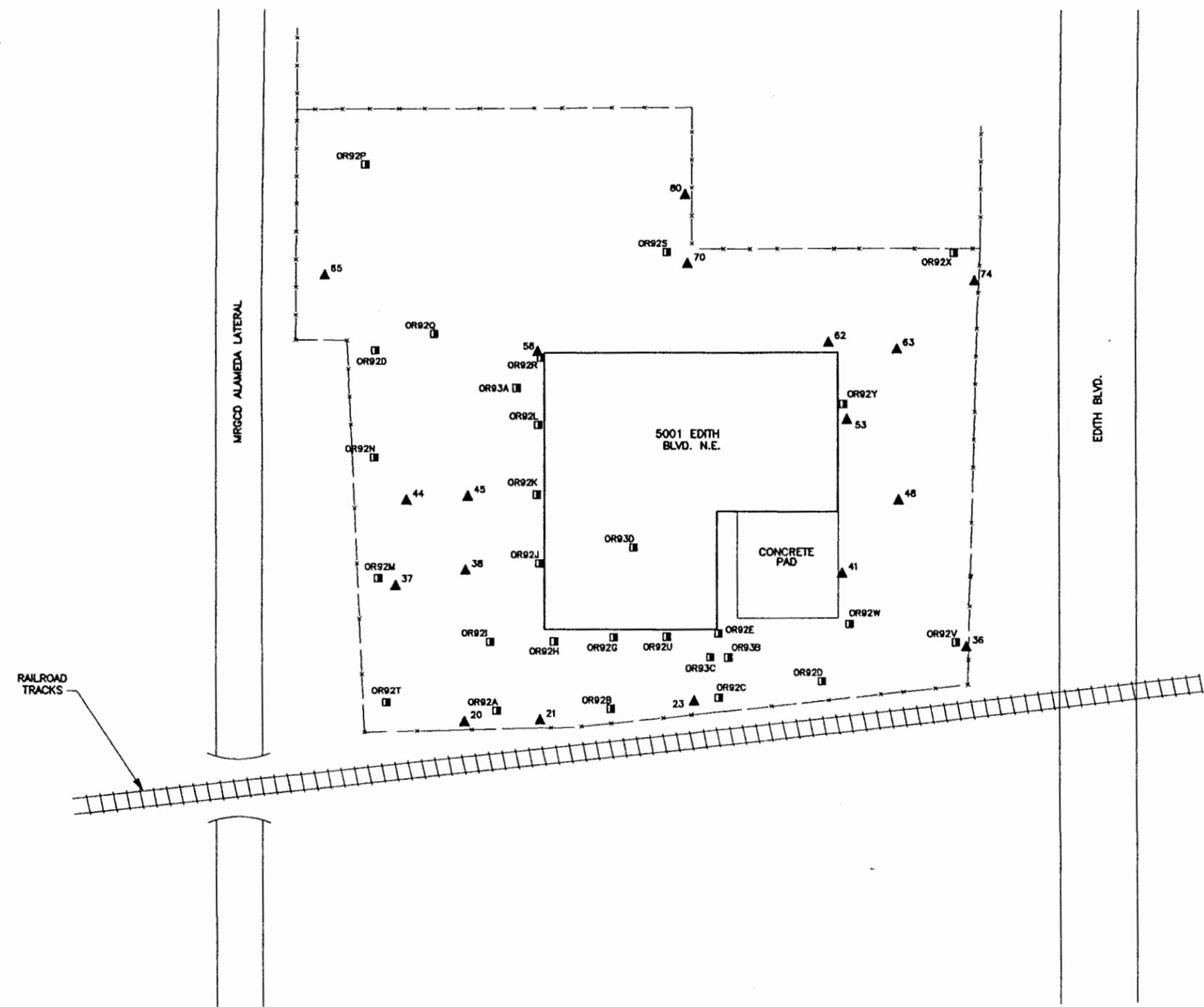


MONITORING WELL LOCATIONS  
AT OLD RINCHEM SITE  
PREPARED FOR  
**RINCHEM COMPANY, INC.**  
**ALBUQUERQUE, NEW MEXICO**

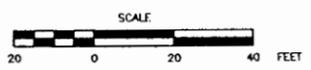
△	ISSUED FOR PRESENTATION	S.B.E.		
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY
			AP'D BY	

DATE: 3-30-95	FIGURE 1	DRAWING NUMBER
SCALE: AS SHOWN		94-164-E3

DRAWING NUMBER 94-164-E4



**LEGEND:**  
 OR92Y SOIL BORING LOCATION AND DESIGNATION  
 36 SURFACE SOIL SAMPLE LOCATION AND DESIGNATION

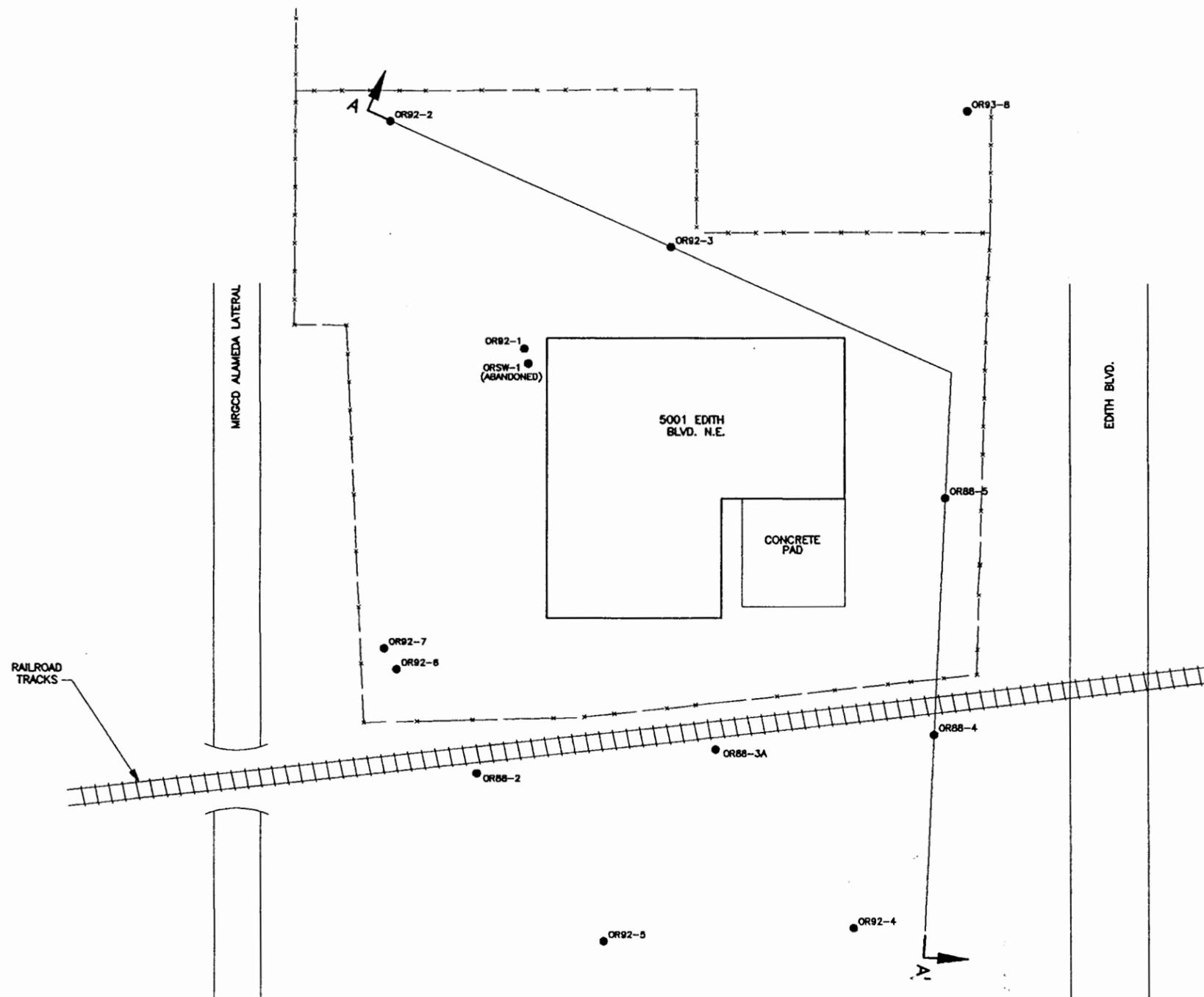


SOIL BORING AND  
 SURFACE SOIL SAMPLE LOCATIONS  
 AT OLD RINCHEM SITE  
 PREPARED FOR  
**RINCHEM COMPANY, INC.**  
**ALBUQUERQUE, NEW MEXICO**

△	ISSUED FOR PRESENTATION	S.B.E.		
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY
			AP'D BY	

DATE: 4-4-95	FIGURE 1	DRAWING NUMBER 94-164-E4
SCALE: AS SHOWN		

DRAWING NUMBER  
94-164-E6



**LEGEND:**  
 ● OR88-4 MONITORING WELL LOCATION AND DESIGNATION

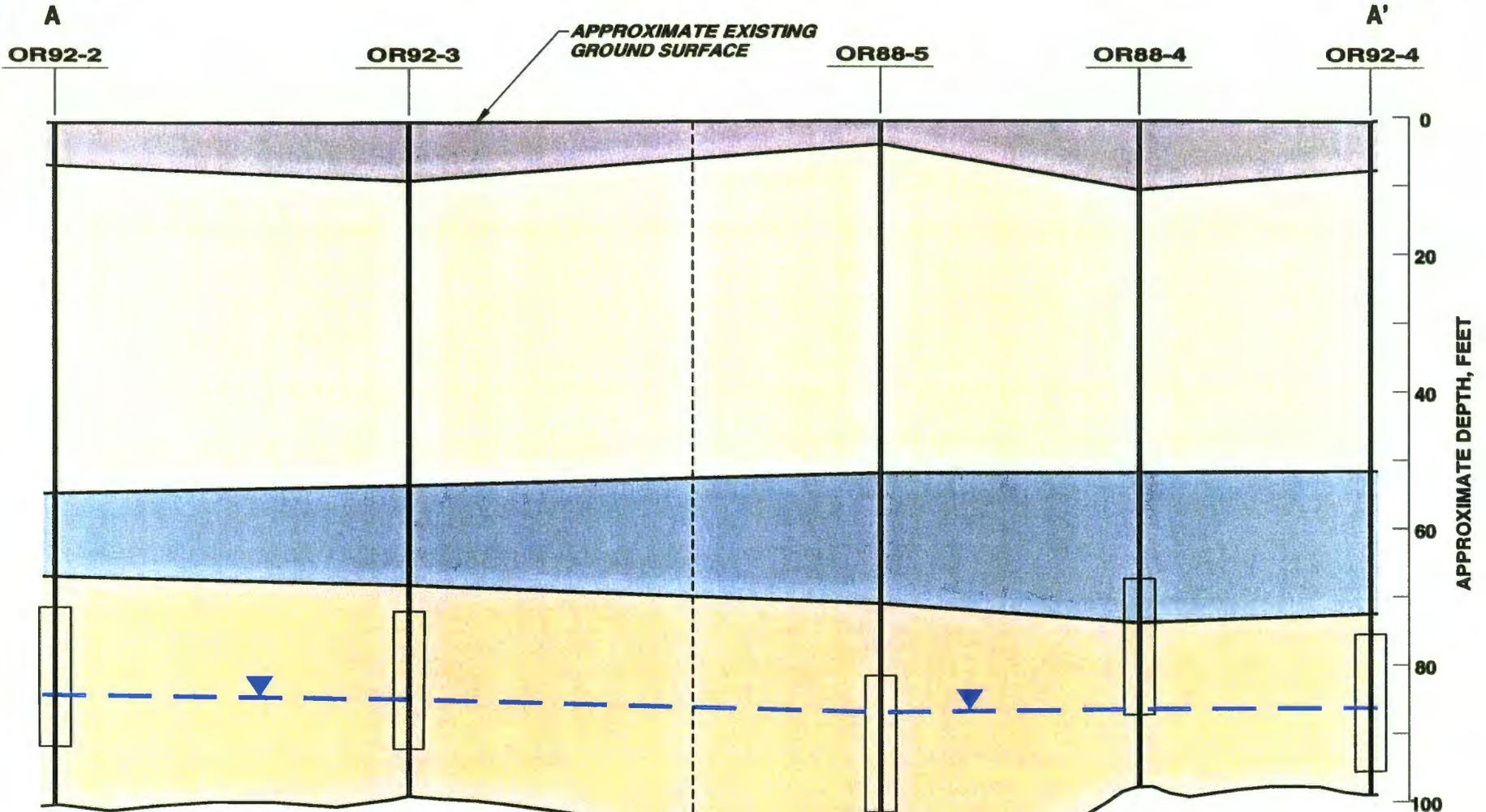


GENERALIZED CROSS SECTION  
 A-A' LOCATION  
 AT OLD RINCHEM SITE  
 PREPARED FOR  
**RINCHEM COMPANY, INC.**  
**ALBUQUERQUE, NEW MEXICO**

△	ISSUED FOR PRESENTATION	S.B.E.		
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY
			AP'D BY	

DATE: 4-5-95	FIGURE 1	DRAWING NUMBER
SCALE: AS SHOWN		94-164-E6

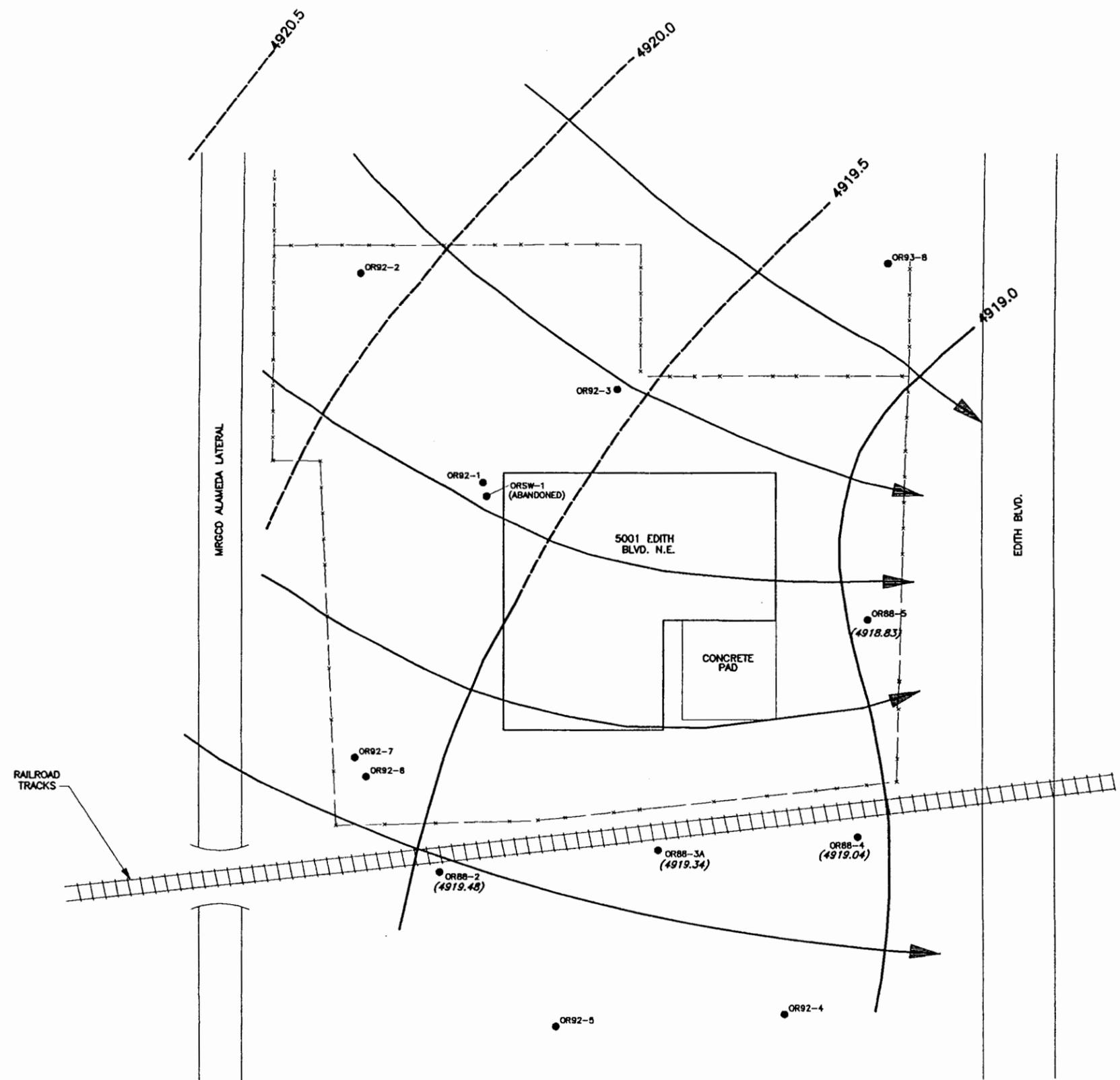
94-164-B7



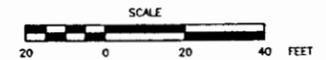
-  VALLEY FILL-SILTY SAND AND SILT
-  VALLEY FILL-MEDIUM TO COARSE SAND
-  SANTE FE GROUP-GRAVEL AND COBBLES
-  SANTE FE GROUP-FINE AND VERY FINE SAND

**GENERALIZED CROSS SECTION A-A'**

DRAWING NUMBER  
94-164-E14



- LEGEND:**
- OR88-4 MONITORING WELL LOCATION AND DESIGNATION
  - (4918.83) WATER LEVEL ELEVATION, FEET ABOVE MEAN SEA LEVEL
  - 4919.0 WATER LEVEL ELEVATION CONTOUR LINE
  - ➔ DIRECTION OF GROUND WATER FLOW



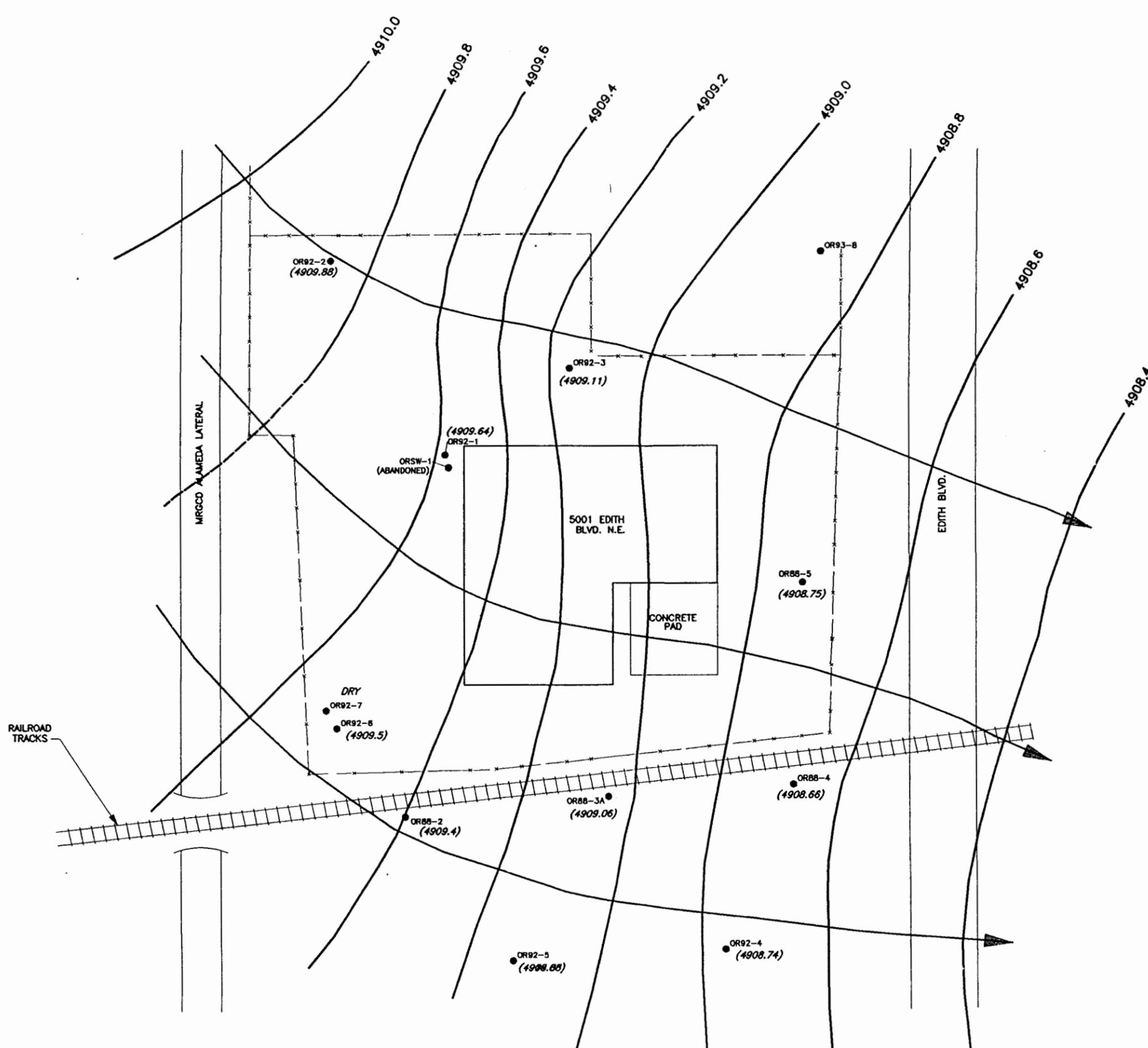
WATER LEVEL CONTOUR MAP  
NOVEMBER, 1988  
PREPARED FOR  
**RINCHEM COMPANY, INC.**  
ALBUQUERQUE, NEW MEXICO

No.	ISSUED FOR PRESENTATION	S.B.E.		
	DATE	ISSUE / REVISION	DWN. BY	CK'D BY AP'D BY

REFERENCE:  
ADAPTED FROM: POTENTIOMETRIC SURFACE MAP-1988.  
BY BILLINGS & ASSOCIATES, INC. DATED: JUNE, 1993.

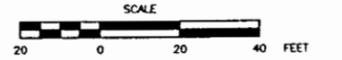
DATE: 4-11-94	FIGURE 1	DRAWING NUMBER
SCALE: AS SHOWN		94-164-E14

DRAWING NUMBER 94-164-E15



**LEGEND:**

- OR88-4 MONITORING WELL LOCATION AND DESIGNATION
- (4908.75) WATER LEVEL ELEVATION, FEET ABOVE MEAN SEA LEVEL
- 4909.0 WATER LEVEL ELEVATION CONTOUR LINE
- ➔ DIRECTION OF GROUND WATER FLOW



WATER LEVEL CONTOUR MAP  
 MARCH, 1995  
 PREPARED FOR  
**RINCHEM COMPANY, INC.**  
**ALBUQUERQUE, NEW MEXICO**

△	ISSUED FOR PRESENTATION	S.B.E.			
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

DATE: 4-11-94	FIGURE 1	DRAWING NUMBER 94-164-E15
SCALE: AS SHOWN		

## OLD RINCHEM SITE

- \* Site Orientation
- \* Site Hydrology
- \* **Site Investigations**
- \* Further Investigations

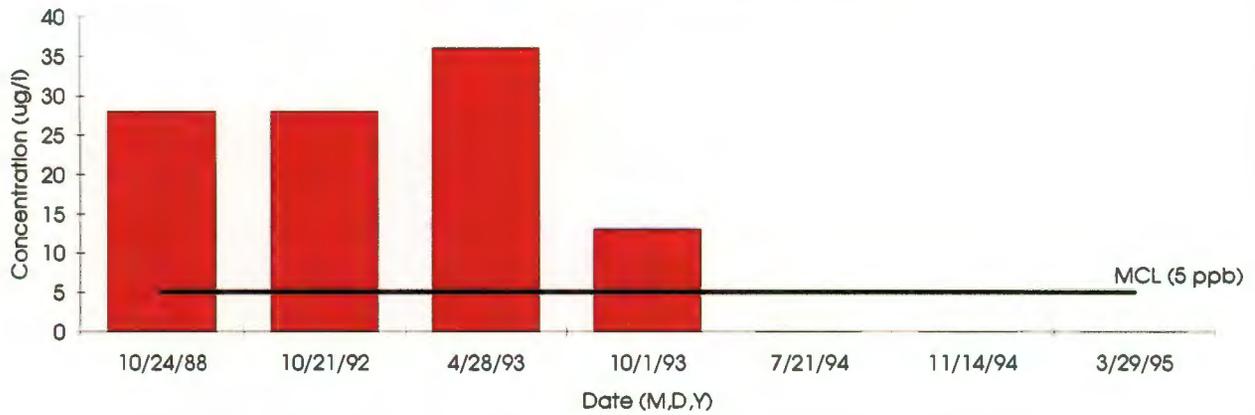


## SUMMARY OF INVESTIGATIONS

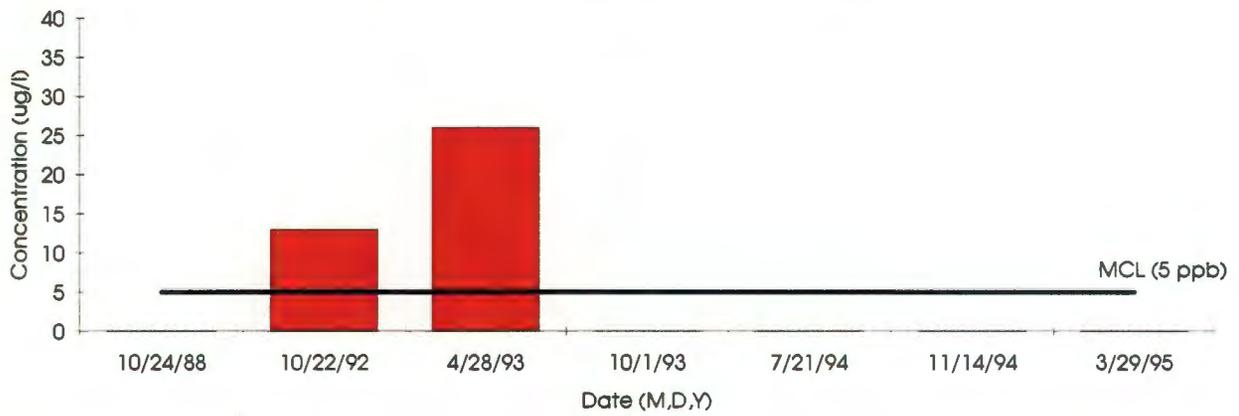
- 1984 - State:           \* Soil, on-site well, contained clean-up
- 1988 - State           \* Install 5 wells  
                          \* 3 soil borings analyzed, upper 10 feet  
                          \* Water quality data
- 1992 - Rinchem       \* Install 7 wells, sample and analyze water  
                          \* 19 soil analyses
- 1993 - Rinchem       \* Install 1 well  
                          \* 4 soil borings, surface to 50 feet  
                          \* Water quality data
- 1994 - Rinchem       \* Soil gas survey  
                          \* Monitor groundwater and collect surface soils



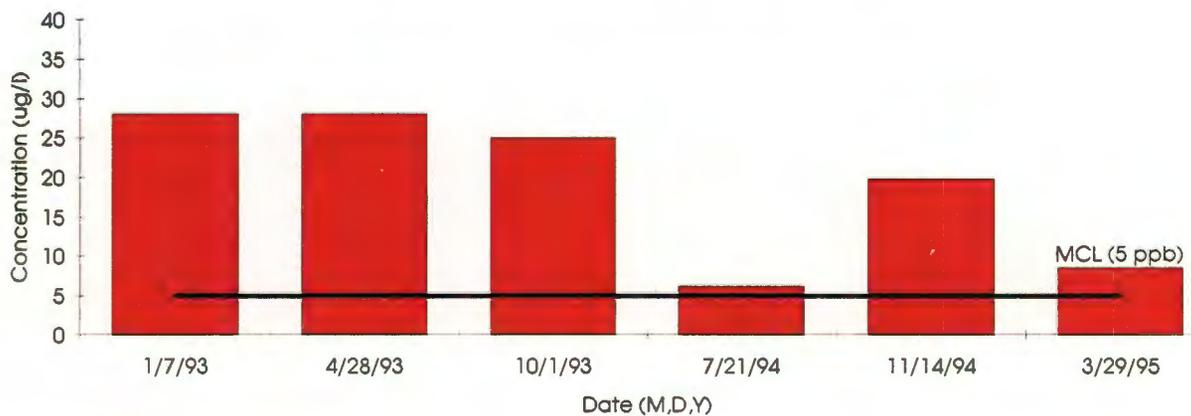
### TRICHLOROETHENE (TCE) IN OR88-3A OVER TIME



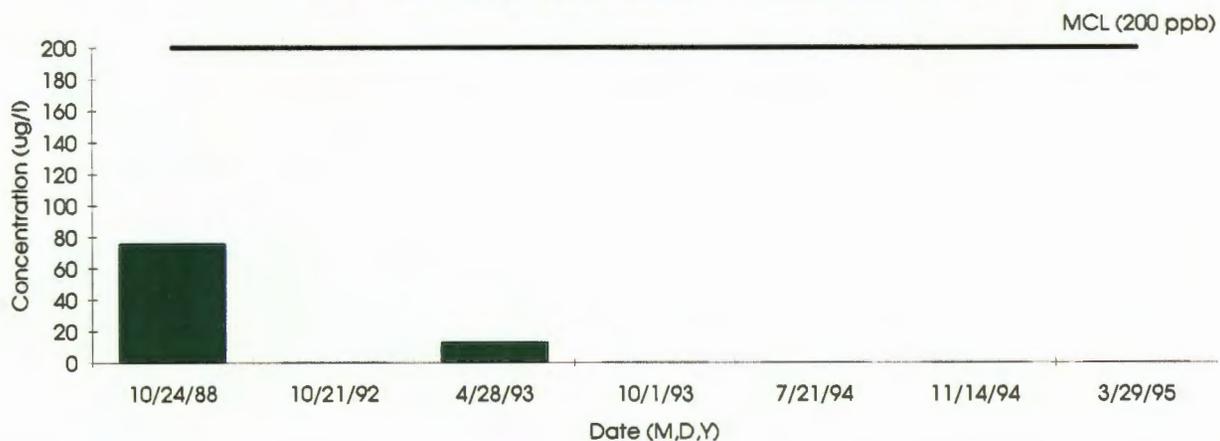
### TRICHLOROETHENE (TCE) IN OR88-5 OVER TIME



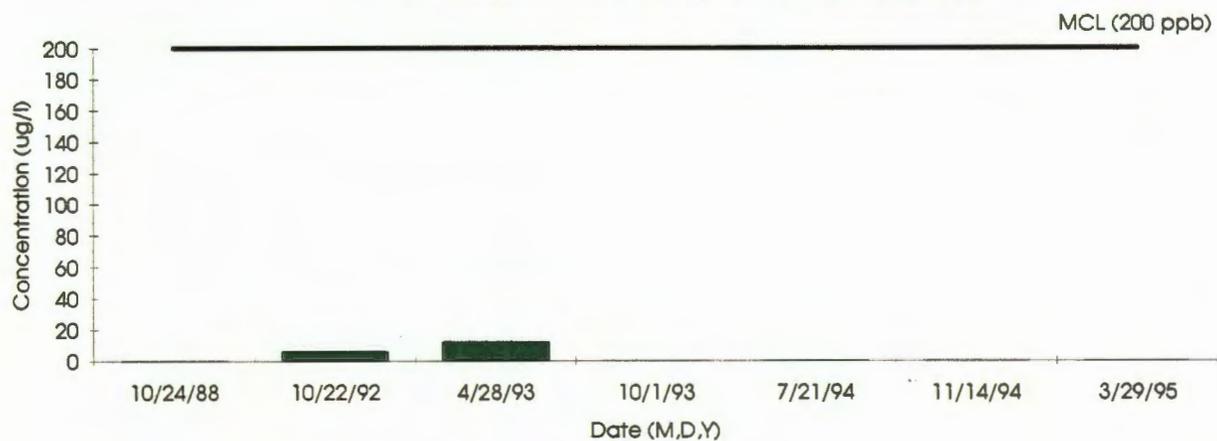
### TRICHLOROETHENE (TCE) IN OR92-3 OVER TIME



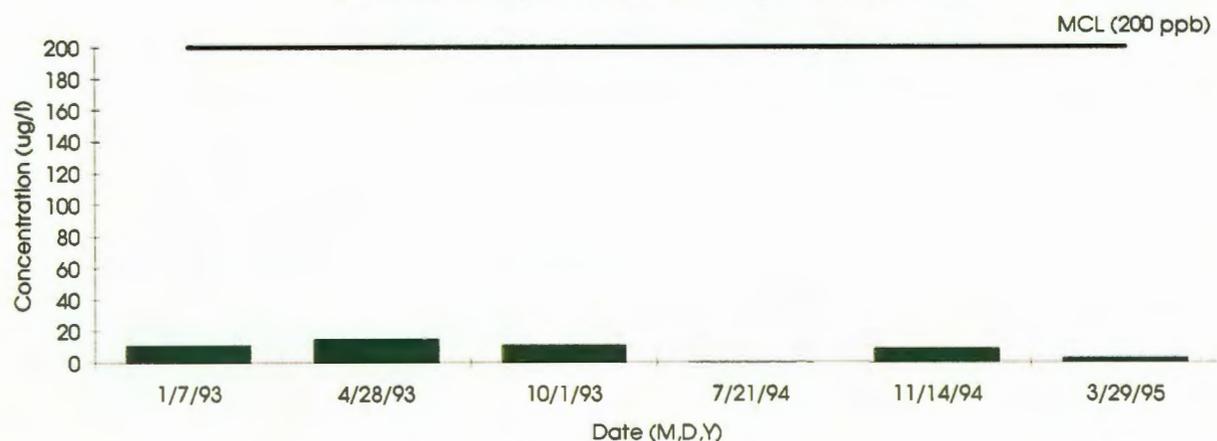
### 1,1,1 TRICHLOROETHANE (TCA) IN OR88-3A OVER TIME

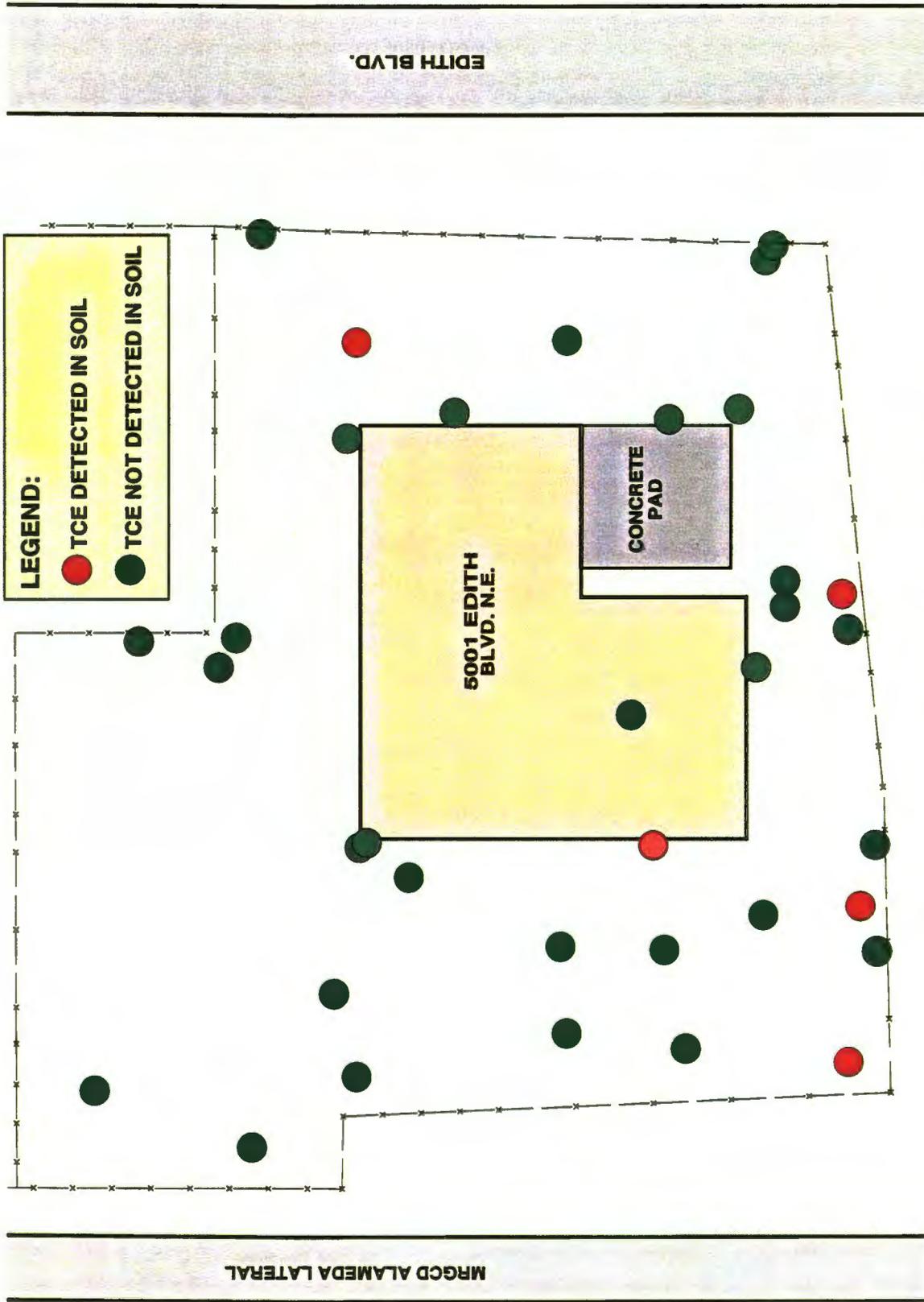


### 1,1,1 TRICHLOROETHANE (TCA) IN OR88-5 OVER TIME



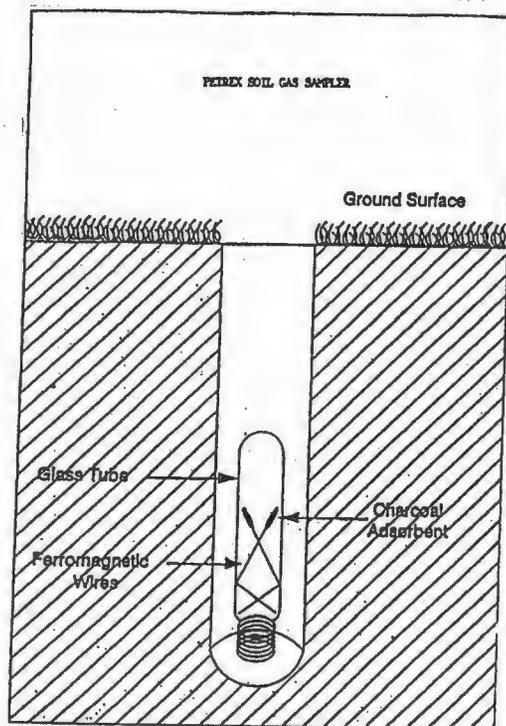
### 1,1,1 TRICHLOROETHANE (TCA) IN OR92-3 OVER TIME





# TCE DETECTED IN SITE SOILS

# SOIL GAS SURVEY



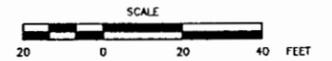
- \* Detailed areal and depth coverage
- \* Identify constituents of concern
- \* Identify "hot spots"

DRAWING NUMBER  
94-164-E1



LEGEND:

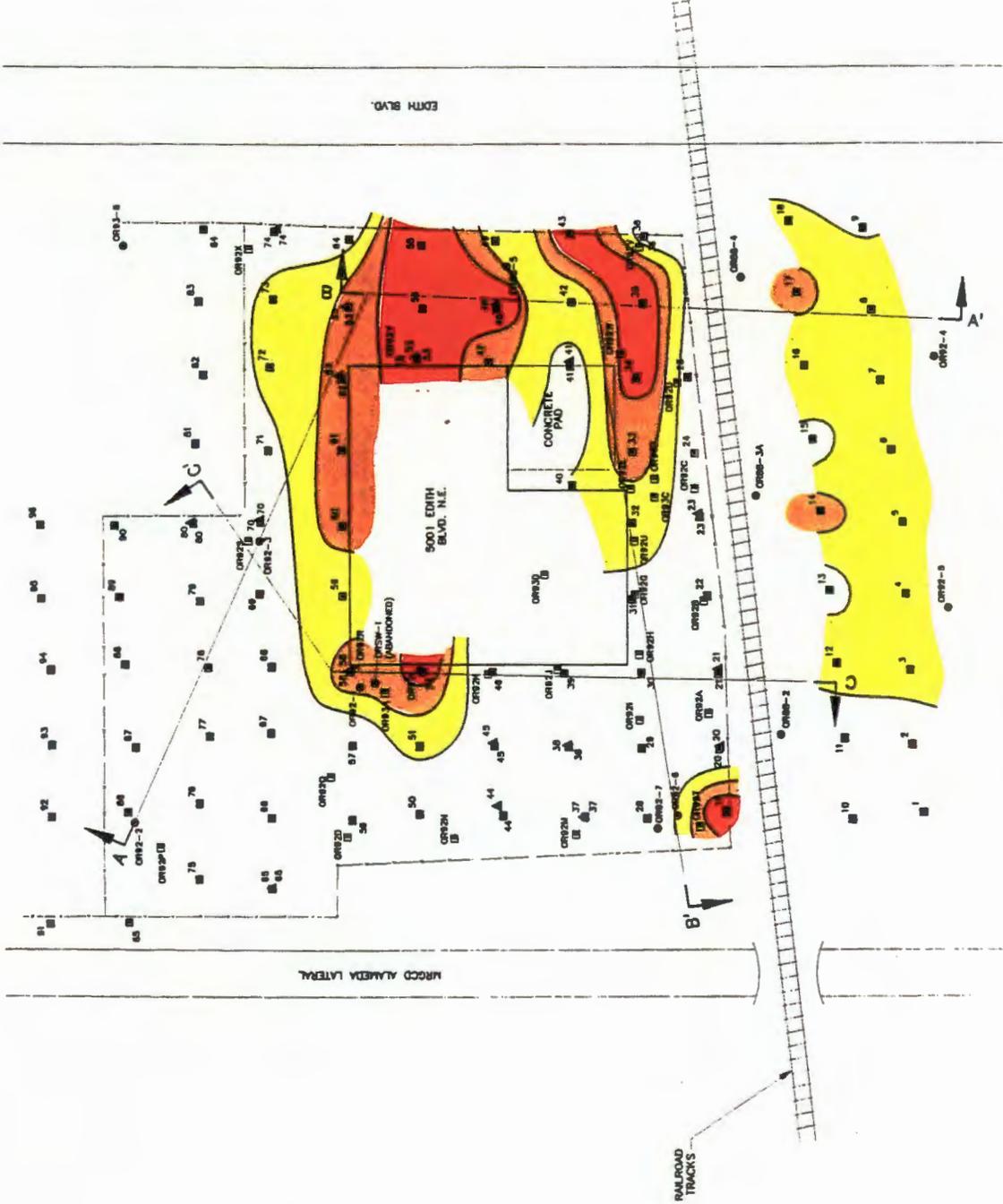
43 ■ SOIL GAS SAMPLE LOCATION AND DESIGNATION



SOIL GAS SAMPLING LOCATIONS  
AT OLD RINCHEM SITE  
PREPARED FOR  
**RINCHEM COMPANY, INC.**  
ALBUQUERQUE, NEW MEXICO

1-9-95	ISSUED FOR SOIL GAS SURVEY REPORT	D.J.R.		
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY
			AP'D BY	

DATE: 1-9-95	FIGURE 1	DRAWING NUMBER
SCALE: AS SHOWN		94-164-E1



White: Considered background  
 (low to nondetect)  
 Yellow: Represent low levels  
 Orange: medium levels of TCE  
 Red: High levels of TCE

## SOIL GAS SURVEY RESULTS TCE AT OLD RINCHEM SITE

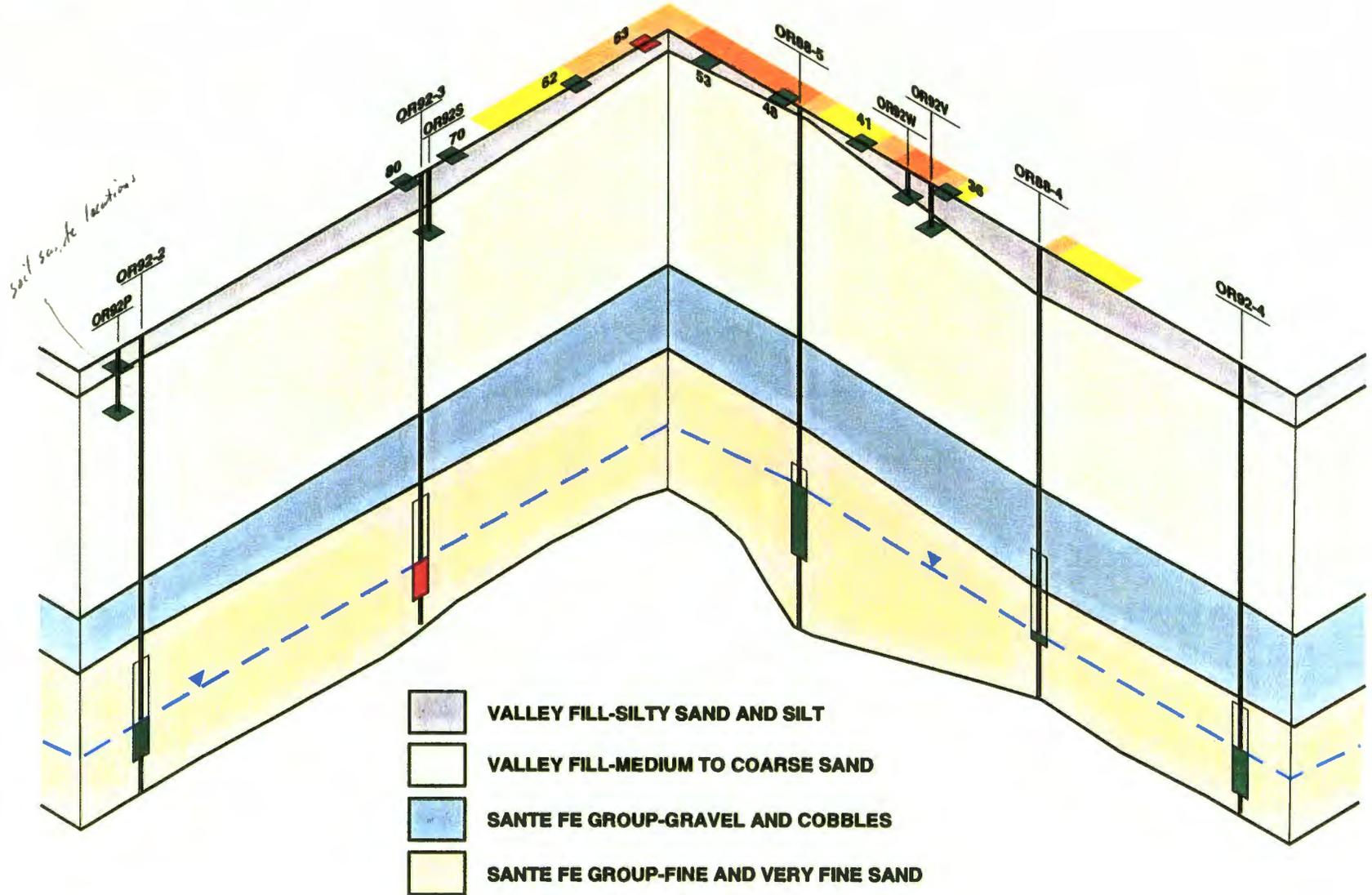
# DATA EVALUATIONS



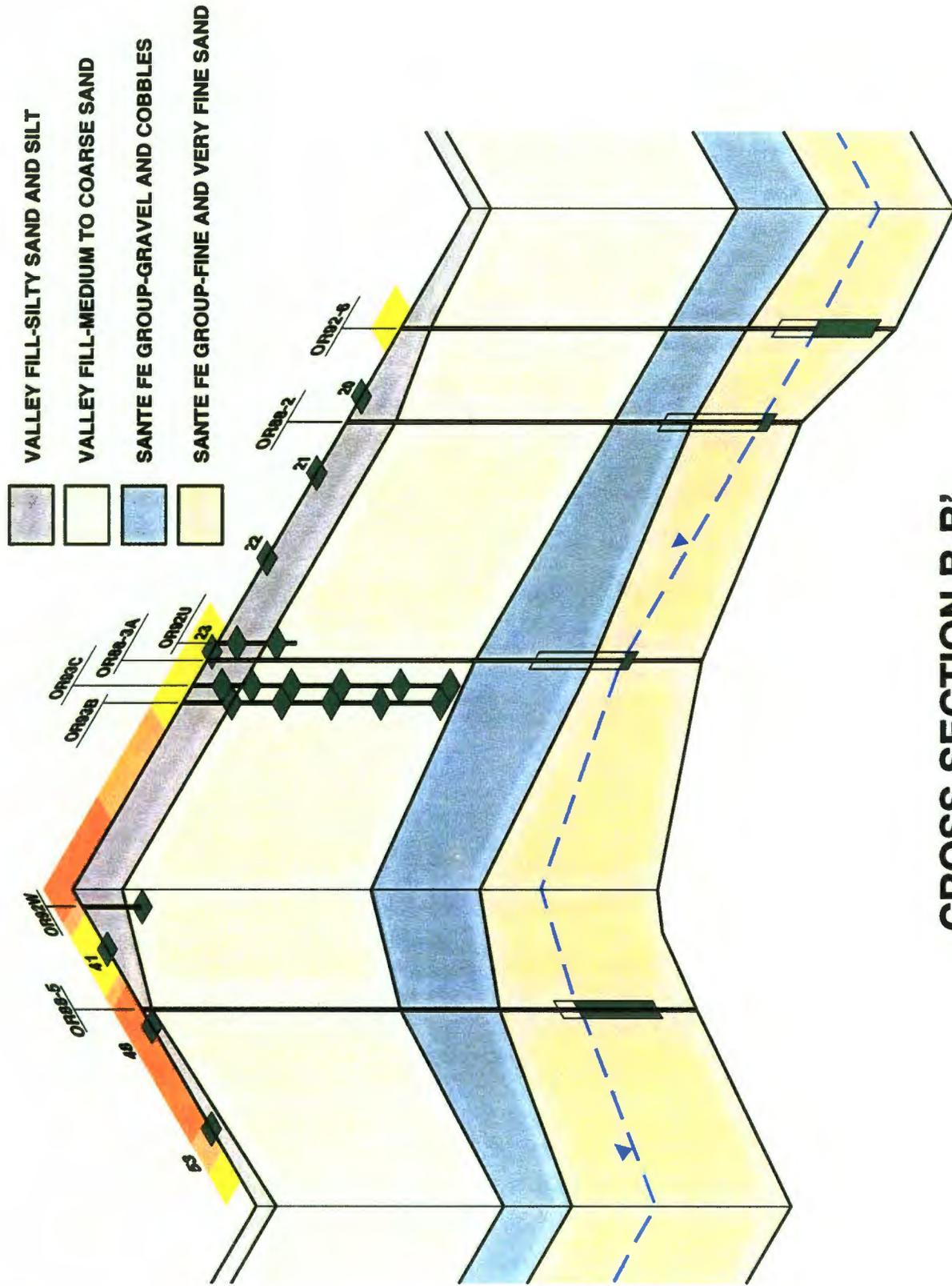
We Do It Well ...

... Because We Care

Green : TCE is u  
Red : TCE is detected

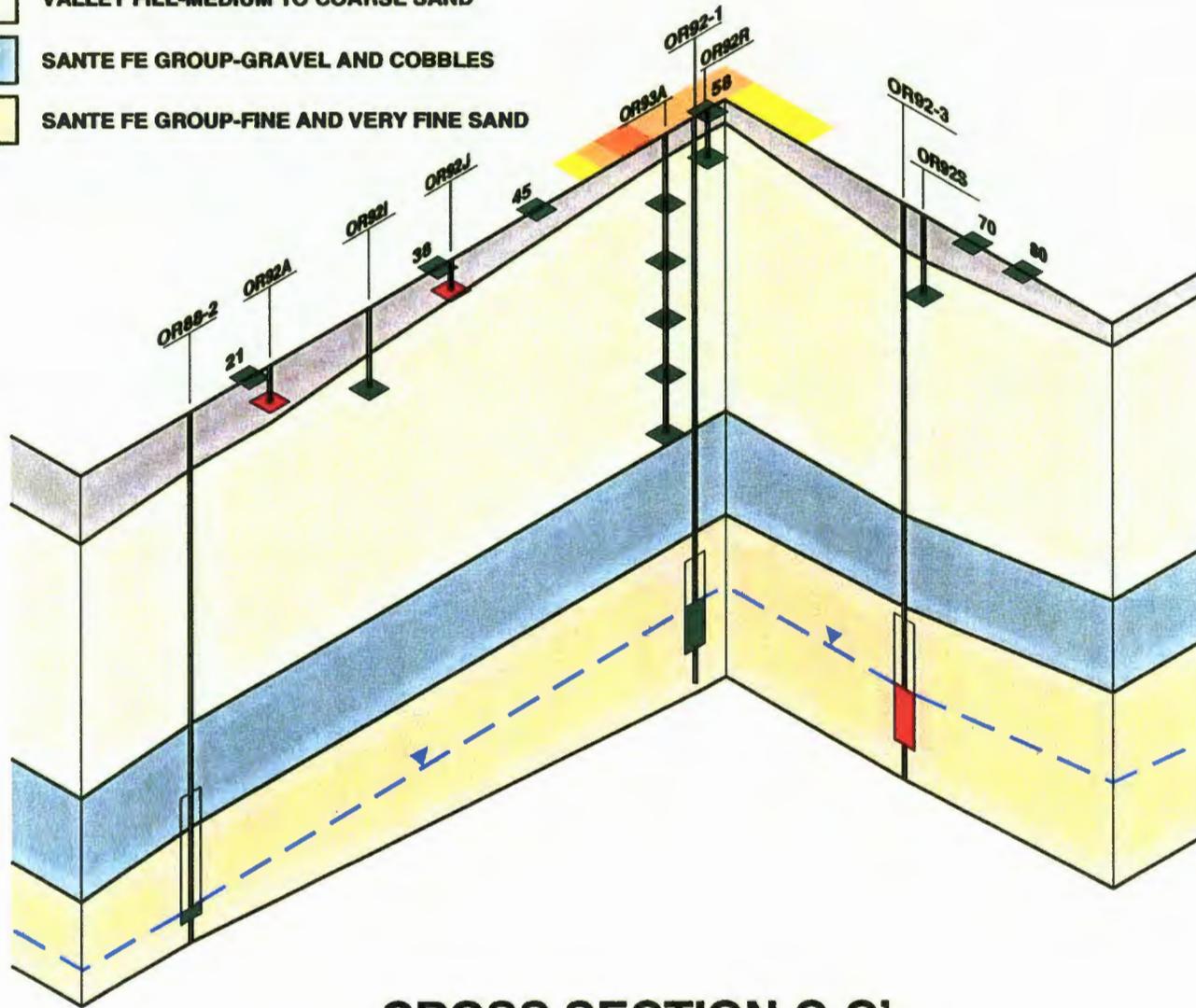


**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

-  VALLEY FILL-SILTY SAND AND SILT
-  VALLEY FILL-MEDIUM TO COARSE SAND
-  SANTE FE GROUP-GRAVEL AND COBBLES
-  SANTE FE GROUP-FINE AND VERY FINE SAND



**CROSS SECTION C-C'**

## CONCLUSIONS

- \* Organics are present in soils
  - Soil samples
  - Soil gas survey
  
- \* Organics are present in ground water
  - Identified in samples
  - No on-site source

## OLD RINCHEM SITE

- \* Site Orientation
- \* Site Hydrology
- \* Site Investigations
- \* **Further Investigations**



## FURTHER ACTION NEEDED

- \* Sample soil in the two areas east of the building where high soil gas survey results were seen.
- \* Unless the data from this soil sampling shows contamination above what is already seen, no additional work is needed to characterize the site.
- \* No remedial action is indicated.



## EPA's REQUEST FOR DATA

- \* Surface soil analysis for Risk Assessment



## NEW MEXICO ENVIRONMENT DEPARTMENT'S REQUIREMENTS

- \* Install 2 wells east of Edith blvd. and site.
  - Screen surface aquifer
  - To confining layer, 250 feet.



RINCHEM COMPANY INC.  
OLD SITE REMEDIATION

**BASIC ASSUMPTIONS**

1. There is chlorinated solvent groundwater contamination under and around the Old Rinchem Site.
2. Because of Rinchem's use of the property from 1976 to 1983 for storage of hazardous materials and waste, Rinchem is by definition a Potentially Responsible Party.
3. Some level of threat to public health does exist and the site must be assessed to determine appropriate response to the threat.
4. Rinchem has consistently expressed and demonstrated commitment to finance and conduct an investigation and study the alternatives.
5. Rinchem has developed a work plan and expended approximately \$200,000 in implementing the plan.
6. Rinchem has made its plans and results known to the regulatory community. The regulatory processes that were initiated when the site was officially proposed for inclusion on the National Priority List have precluded regulators from technical guidance or support and from informal cooperation.
7. The ranking of this half acre as one of the nation's premier uncontrolled and abandoned hazardous waste sites is caused by assigning unsupported values to Hazard Ranking System factors. The use of these unsupported data forces the process down the same lengthy, costly path as if the site had been a huge chemical landfill.

## DEFECTS IN VALUE ASSIGNMENTS

EPA's CERCLA Hazard Ranking System for groundwater multiplies three factors times each other to obtain a rating of the threat to human health and the environment. The factors are:

- Likelihood of a release to an aquifer
- Waste characteristics (toxicity, mobility, quantity)
- Targets (the number of people affected)

The likelihood of a release was rated at the maximum score (550) because it is determined that two down gradient wells were contaminated and two up gradient wells were not.

The NMEID study of 1988 determined the general flow as 27° East of South. This would make neither well (OR-88-1 or OR 88-5) up gradient from the contaminated down gradient wells or the site. OR-88-1 would miss the site to the Northeast and OR 88-5 is in the parking lot on the east of the site and would flow southeasterly missing even OR 88-4 which was also clean at that time. There is clear evidence of a release in the Hahn Industrial Area, but not at the old Rinchem site.

The waste characteristics factor is composed of two defective values. Reducing either or both of the toxicity/mobility or quantity factors by one order of magnitude would put the site in a more true perspective and preclude listing.

The use of MIBK as the toxicity/mobility factor is based on soil samples supposedly taken from the site in 1984 by Robert Lowy of New Mexico Environmental Improvement Division. The confirmed release to groundwater was of chlorinated solvents. If a factor for confirmed release is used, the released material should be used throughout for consistency, MIBK is not one of the solvents in groundwater. That MIBK ever existed in the soil at the site is questionable for these reasons:

- 1) There was a break in the sample analysis chain-of-custody. The Old Rinchem Site was project Number 2504 in 1984 and the analytical results reported back were for project 2503. Project numbers were changed on the original inspection

report, by an unknown person, more than a year after the inspection. Rinchem's copy, received in 1985, has the two inconsistent project numbers. This change was not properly documented and is cause to seriously question the validity of the 1984 analytical results.

- 2) The site investigator's summary for soil contaminants within the 1984 report are inconsistent with those shown on laboratory analytical reports. On page 4 of the February 18, 1985 Site Inspection Report Robert Lowy listed the following soil contaminants and values in parts per billion (ppb):

1	phthalate	1000
2	toluene	300
3	1,3 dimethyl benzene	80
4	fluorobiphenyl	60

The laboratory analytical results produced by US Testing on the Organics Analysis Data Sheets showed analysis for six phthalate compounds. The only reading above detection limit was 3200 ppb for bis (2-ethyl hexyl) phthalate on sample F 2915 (which was the soil background). This quantity is inconsistent with the 1000 ppb above.

The US Testing reports listed toluene readings above detection limits at 147, 30 and 19 ppb on samples F 2917 (spill tanks), F 2918 (truck off load) and F 2919 (tank pit). Even the combination of these readings (totaling 196) is inconsistent with the 300 ppb reported by Mr. Lowy.

The US Testing reports xylene (1,3-dimethyl benzene) is detected above detection limits, at 109 ppb, for sample F 2917 (spill tanks). This, too, is inconsistent with the 80 ppm reported by Mr. Lowy.

Fluorobiphenyl is not detected in any samples by US Testing, compared to 60 ppb reported by Mr. Lowy.

In addition to the above inconsistencies, US Testing reported positive soil analytical results for methylene chloride (10 ppb,

23 ppb, 29 ppb, and 31 ppb); 2-butanone (MEK) (12 ppb, 983 ppb, and >8000 ppb); Acetone (> 21,000 ppb and >7000 ppb and >6600 ppb); 4-Methyl-2-Pentanone (MIBK) (33 ppb, >1000 ppb and 18 ppb); Tetrachlorethene (13 ppb and 430 ppb); Trichloroethene (66 ppb), and; 1,1,1,-trichloroethane (10 ppb).

Mr. Lowy reported none of these compounds as soil contaminants. It is hard to believe this analysis fits the Site Inspection Report for the "Old Rinchem Site".

- 3) The investigator told me personally that he does not believe he ever saw the analytical results indicating MIBK was present.
- 4) MIBK and other solvents shown in the 1984 analytical report were not found in NMEID samples in 1988 for soil or water.
- 5) Rinchem and NMED sampling and analysis in 1992, 1993, and 1994 confirm this assessment. MIBK was not discovered in either soil or groundwater samples taken on, up gradient and down gradient from the site.

In rating the hazardous waste quantity, EPA's consultant assigned a default factor of ten, "Since the hazardous constituent quantity cannot be adequately determined." The use of the default factor presupposes that the hazardous waste quantity cannot be measured accurately. The HRS gives four standards for measuring waste quantity. The fourth is the area of contamination in square feet divided by thirty four thousand. Because the old Rinchem site consists of approximately 26,000 square feet the affected area can be accurately assessed as less than  $26,000/34,000$  or less than one. This deduction is a less of a reach for accuracy than is necessary for most of the factors scored in the HRS. The information was available to the scorer in early 1992.

Our sampling and analysis in 1992 through 1994 confirm this assessment. The soil sample analytical results were mapped in the Work Plan, and show the majority of the 26,000 square feet of Old Rinchem Site soil not contaminated. Also, it appears that, at most, the 20% in the Southwestern portion is affected.

Additionally the consultant rates in the quantity factor 800 drums observed in 1983 when Rinchem operated the site as if they were still there in 1992. Robert Lowy's inspection of March 1984 make it clear that they were moved to Rinchem's new site by then. It even includes pictures of where they had been. Leaving the drums in the factor still would leave it at less than 1 rather than 10, but it is clearly not reasonable.

Rinchem does not challenge the third factor targets. The protection of Albuquerque's people and water supply are an absolute necessity.