

# **CLOSURE REPORTS**

CJR CONTRACTORS  
ENVIRONMENTAL SERVICES

SOIL ANALYSIS REPORT

DATE: SEPTEMBER 14, 1995  
INSPECTOR: J.L. HAM

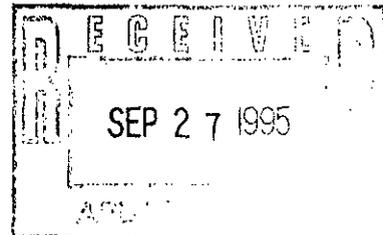
CLIENT: AMOCO PIPELINE  
FACILITY: KING DISCHARGE  
LINE

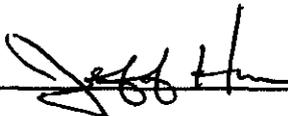
SAMPLE #1	32100	TPH:	TAKEN FROM CONTAMINAED SOIL PILED UP ON PLASTIC
SAMPLE #2	4770	TPH:	TAKEN FROM REMEDIATED SOIL
SAMPLE #3	4510	TPH:	TAKEN FROM REMEDIATED SOIL

LEAK #1

LEV-5-94-R-29

OIL CONTAMINATED SOIL FROM AMOCO PIPELINE'S KING DISCHARGE LINE WAS REMEDIATED BY CJR CONTRACTORS AUGUST 8, 1995. CONTAMINATED SOIL THAT HAD BEEN EXCAVATED EARLIER BY AMOCO PIPELINE AND PUT ON PLASTIC WAS SPREAD OUT. 130 YARDS OF FRESH SOIL WAS MIXED WITH THE CONTAMINAED SOIL AND DISCED TOGETHER UNTIL TPH LEVELS WERE BELOW .5%. THE RESULTS OF SOIL SAMPLES CAN BE FOUND ABOVE. THE REMEDIATED SOIL WAS THEN USED TO BACKFILL EXCAVATED AREA. TPH SAMPLES WERE TAKEN ON LOCATION BY CJR CONTRACTORS USING GENERAL ANALYSIS CORPORATIONS MEGA TPH ANALYZER.



  
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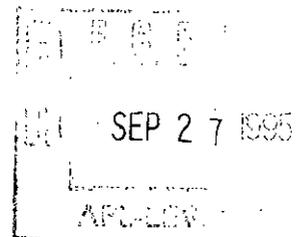
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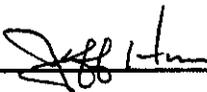
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SAMPLE #3	4890	TPH:	TAKEN FROM REMEDIATED SOIL

LEAK #2

LOV-3-95-R-13

OIL CONTAMINATED SOIL FROM AMOCO PIPELINE'S TRANSFER PUMP LEAK WAS REMEDIATED BY CJR CONTRACTORS AUGUST 3, 1995. CONTAMINATED SOIL THAT HAD BEEN EXCAVATED EARLIER BY AMOCO PIPELINE AND PILED UP ON PLASTIC WAS SPREAD OUT. 90 YARDS OF FRESH SOIL WAS MIXED WITH THE CONTAMINATED SOIL AND DISCED TOGETHER UNTIL TPH LEVELS WERE BELOW .5%. THE RESULTS OF SOIL SAMPLES CAN BE FOUND ABOVE. REMEDIATED SOIL WAS THEN USED TO BACKFILL EXCAVATED AREA AND BUILD A BERM WALL AROUND TRANSFER PUMP. TPH SAMPLES WERE TAKEN ON LOCATION BY CJR CONTRACTORS USING GENERAL ANALYSIS CORPORATIONS MEGA TPH ANALYZER.



  
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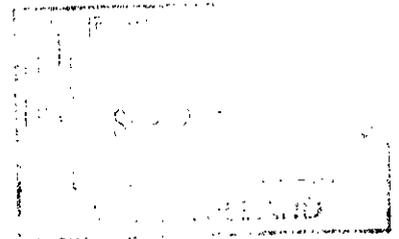
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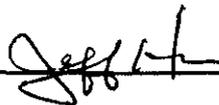
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SAMPLE #3	4990	TPH:	TAKEN FROM REMEDIATED SOIL
SAMPLE #4	4970	TPH:	TAKEN FROM REMEDIATED SOIL

LEAK #3

LOV-3-95-R-15

OIL CONTAMINATED SOIL FROM AMOCO PIPELINE'S LEAK ON CARLA McGRWALS LAND WAS ALSO REMEDIATED BY CJR CONTRACTORS. REMEDIATION OF APPROXIMATELY 970 CUBIC YARDS WAS COMPLETED AUGUST 18, 1995. CONTAMINATED SOIL WAS EXCAVATED AND SPREAD OUT TO DRY. FRESH SOIL FROM AROUND EXCAVATED AREA WAS MIXED WITH CONTAMINATED SOIL AND DISCED TOGETHER UNTIL TPH LEVELS WERE BELOW .5%. IRRIGATION PIPE WAS LAID FROM IRRIGATION MOTOR TO EXCAVATED AREA. FRESH WATER WAS THEN USED TO FILL EXCAVATED AREA. AFTER DRYING, THE AREA WAS THEN PARTIALLY BACKFILLED AND SEVEN SACKS OF 45-0-0 FERTILIZER WAS BROADCAST ON REMEDIATED AREA. A DYKE WAS THEN BUILT AROUND AREA AND FRESH WATER WAS AGAIN USED TO FILL AREA. AFTER DRYING, THE AREA WAS BACKFILLED. A MAINTAINER WAS THEN USED TO LEVEL THE AREA. SOIL SAMPLES WERE TAKEN ON SITE BY CJR CONTRACTORS USING GENERAL ANALYSIS CORPORATIONS MEGA TPH ANALYZER.



  
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# CJR

Environmental Services

ENVIRONMENTAL  
REMEDiation  
FOR THE  
ENTIRE OIL  
INDUSTRY

SOIL REMEDIATION REPORT

ON AMOCO PIPELINE'S  
KING DISCHARGE LINE

FOR

AMOCO PIPELINE

401 W. Broadway  
Denver City, Texas 79323

(806) 592-2558 - Office  
(806) 592-3106 - Fax

SOIL REMEDIATION REPORT

ON AMOCO PIPELINE'S  
KING DISCHARGE LINE

FOR

AMOCO PIPELINE

BY

CJR CONTRACTORS, INC  
ENVIRONMENTAL SERVICES

SEPTEMBER 15, 1995



TABLE OF CONTENTS

- I. DETAILED DESCRIPTION OF ANALYZER USED FOR TAKING TPH SAMPLES
- II. LEAK #1  
SOIL ANALYSIS REPORT WITH COMMENTS
- III. PICTURES OF CONTAMINATED SOIL AND COMPLETED JOB
- IV. LEAK #2  
SOIL ANALYSIS REPORT WITH COMMENTS
- V. PICTURES OF CONTAMINATED AREA AND COMPLETED JOB
- VI. LEAK #3  
SOIL ANALYSIS REPORT WITH COMMENTS
- VII. PICTURES OF CONTAMINATED AREA AND COMPLETED JOB

GENERAL ANALYSIS CORPORATION

MEGA-TPH ANALYZER

INSTRUMENT DESCRIPTION

THE MEGA-TPH ANALYZER IS A WAVELENGTH-SPECIFIC, DUAL CHANNEL, PORTABLE INFRARED FILTOMETER.

THE ANALYTICAL WAVELENGTH USED TO QUANTIFY TOTAL PETROLEUM HYDROCARBONS IS 3.4 UM AS IS SPECIFIED IN EPA METHOD 418.1, "PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE". THE REFERENCE WAVELENGTH, WHICH IS OUT OF THE C-H STRETCH BAND, PROVIDES A SIGNAL WHICH IS CONSTANTLY RATIOED AGAINST THE ANALYTICAL SIGNAL FOR INCREASED ELECTRONIC STABILITY.

THE MEGA-TPH ANALYZER IS FACTORY CALIBRATED WITH EPA METHOD 418.1 REFERENCE OIL WHICH MEETS ALL RAILROAD COMMISSION REQUIREMENTS.

CJR CONTRACTORS  
ENVIRONMENTAL SERVICES

SOIL ANALYSIS REPORT

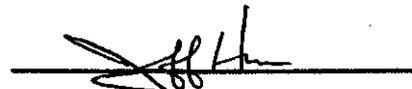
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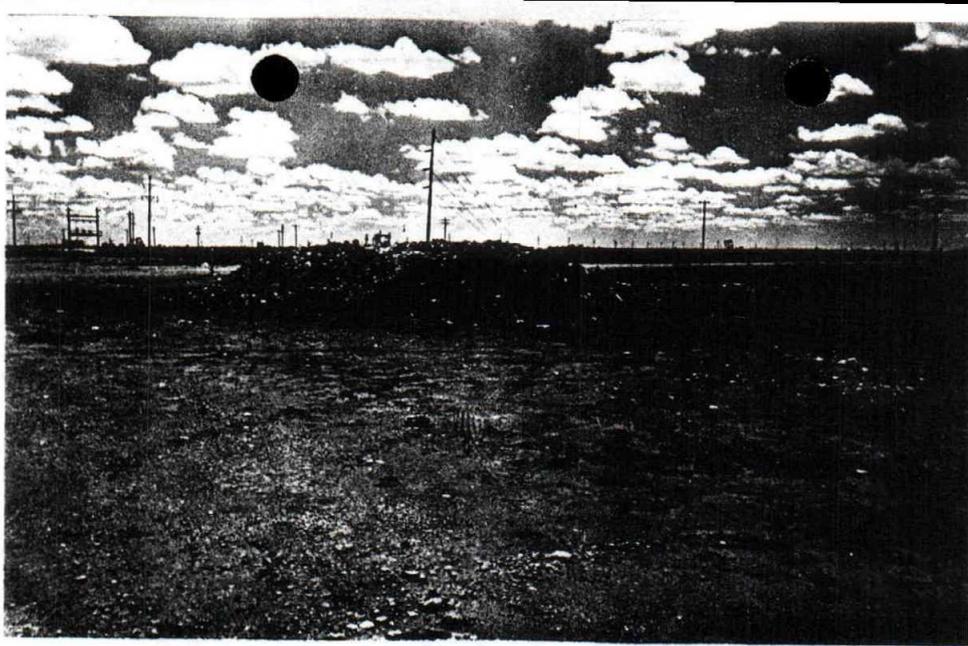
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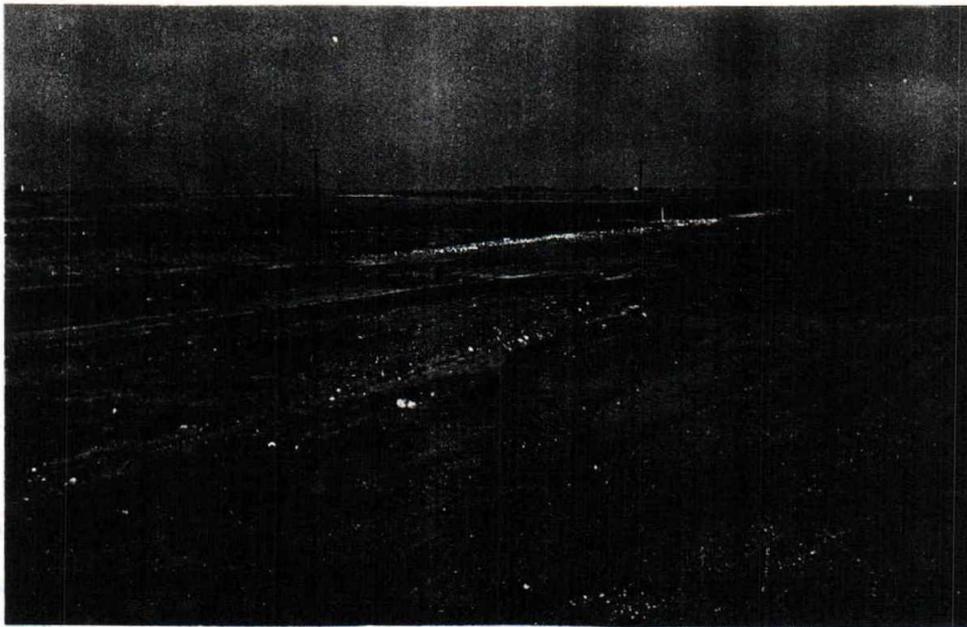
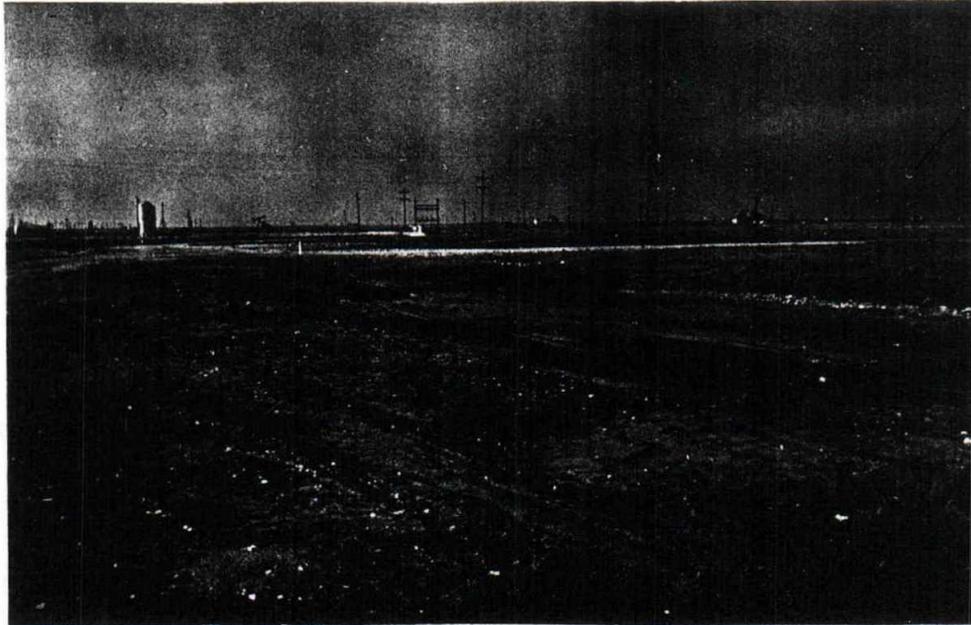
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PHOTOGRAPHED BY  
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ENVIRONMENTAL SERVICES

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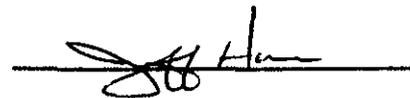
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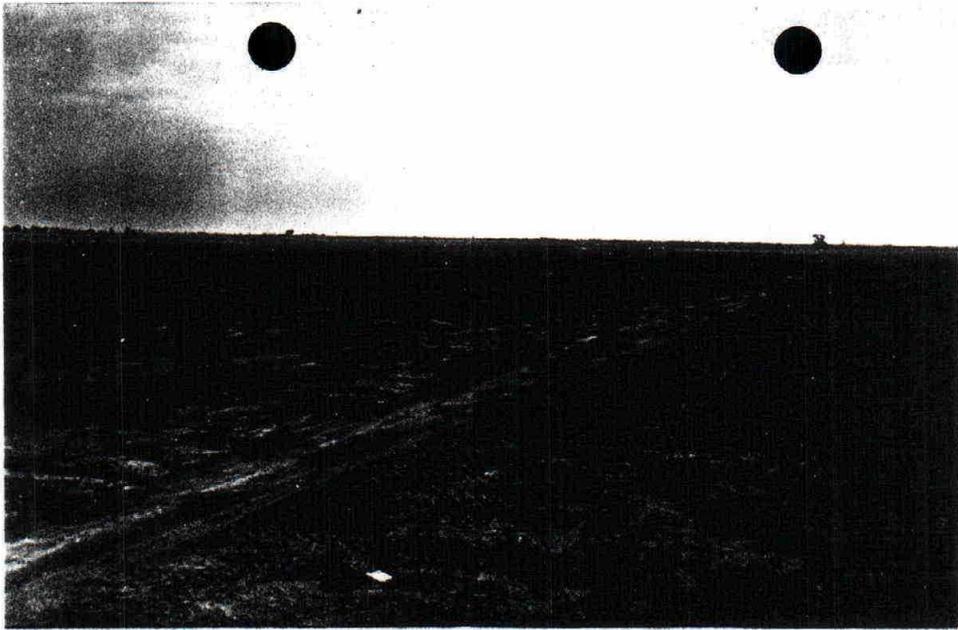
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STANFORD UNIVERSITY  
JUL 1951  
AERIAL PHOTOGRAPHY