

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax: (303) 894-2109

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

RECEIVED

FEB 27 2004

OIL & GAS COMMISSION

OGCC Employee:

☐ Spill ☐ Compliance
☐ Inspection ☐ MNA/V

Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☒ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe):

GENERAL INFORMATION

OGCC Operator Number: 8840		Contact Name and Telephone	
Name of Operator: Blue Chip Oil Inc.		Keith Crouch, Edgemark Development 303-929-7016	
Address: _____		John Mahoney, MEC Inc 970-352-2644 off 970-381-5951 cell 670-156-9511 fax	
City: _____	State: CO Zip: 80671	No: _____	Fax: _____
API Number: 0517517857	County: Weld	Facility Number: 62712	
Facility Name: Anderson/Combs	Well Number: 6		
Well Name: _____	Location: (QtrQtr, Sec, Twp, Rng, Meridian): NWNW 75 4N 66W	Latitude: _____ Longitude: _____	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.):	Oil Condensate
Site Conditions: Is location within a sensitive area (according to Rule 901e)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N If yes, attach evaluation Per COGCC 3.502 LTR determination
Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.):	Intertied AG To west, Residential to East and South
Soil type, if not previously identified on Form 2A or Federal Surface Use Plan:	Clayey Silt to fine sand (see note subsurface boring investigation)
Potential receptors (water wells within 1/4 mi, surface waters, etc.):	None

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	Groundwater Impact approximately 50 feet south of tank battery at MW3. No contaminants detected at MW6 120 feet south; MW8 40 feet to the SW of tank battery and MW9 20 feet to the W impacted, MW2 15 to the north of tank battery also impacted GW. MW2 10 feet to north. Soil impact above sunear zone appears to have been limited to the area south and west of the tank battery.	Per subsurface limited Phase II site assessment in July 2003 performed by Kumar & Assoc.
<input checked="" type="checkbox"/> Vegetation		
<input type="checkbox"/> Groundwater		
<input type="checkbox"/> Surface water		

REMEDIALATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

The Phase II was performed based on a recommendation from a Phase I report in April 18, 2003. 29 borings, with 9 monitoring well conversions were installed in July 2003. The Limited Phase II report by Kumar and Associates dated August 26, 2003 has been provided to the COGCC. Based on the results of the investigation the operator has inspected, tested, and checked the existing systems for the source of the release. No sources of the release have been determined for the existing equipment. The facility has been pumping the existing 2 inch wells with confirmed free product and have also excavated trenches on the north and west side to collect the free product.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or _____

Land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

- 1) Impacted soil will be disposed of offsite or arrangements will be made (with the COGCC) approval to landfarm the impacted soils either on-site or at an offsite location.
- 2) The existing monitoring wells MW3, 8, 9, and 1 will be pumped to remove the free product. The removed fluids will be disposed of at an offsite facility or placed into the onsite holding tank system.
- 3) Currently scheduled for February 16, emergency excavation trenches will be installed to intercept free product in the vicinity of the MW3.
- 4) Additional trenches are planned along the south side of the tank battery and in the area between the tank battery and MW3 to evaluate impact and to remove the floating oil, if encountered.
- 5) If impacted soils are encountered in the trenches, the impacted soils will be removed if feasible.
- 6) It is intended that the new monitoring wells should establish a downgradient point of compliance.



01187913



REMEDIATION WORKPLAN (Cont.)

OGCC Employee

Name of Operator:

OGCC Operator No:

Received Date:

Well Name & No:

Facility Name & No:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods).

Existing Monitoring Wells MW1,3,8, and 9 have free oil product floating on the water table. MW2 has BTEX levels exceeding regulatory standard. Wells MW2 and 7 will be sampled during the week of Feb 16, 2004. Analysis will include BTEX. Subsequent sampling will be performed quarterly. Additional wells will be installed (5 proposed wells) following the soil excavation trenching activity and the analysis of the water samples collected from the existing wells. Soil samples from the trenching and well installation will be analyzed by BTEX and TPH418.1. Water Samples will be analyzed by BTEX.

Describe reclamation plan. Discuss existing and new grade recontouring, method and testing of compaction alleviation, and reseeding program including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if

The Anderson-Coombs #6 is an active site and currently it is intended to remain active. The proposed activity is designed to further delineate the extent of impact and to determine the source of the release. The tank battery vicinity is an active area with buried pipelines for Duke Energy and Atmos Gas passing through the investigation area. Testing and inspection of the existing tank battery equipment and tanks have not indicated an active release point.

Following the proposed trenching activity and the use of these trenches to intercept the floating product the trenches will be filled and the surface returned to the surrounding grade.

The existing and proposed monitoring wells will be protected by exterior casing. At such time that the wells are not needed the monitoring wells will be abandoned in an appropriate manner and the exterior casing removed.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☐ N If yes, describe:

The proposed activity is designed to delineate and intercept the free oil that had been detected. The excavation activity will also include the removal of impacted soils that are encountered. If deemed necessary and feasible during this activity the excavations may be enlarged to remove impacted soils. It will be evaluated after these activities has impacted or improved the overall impact to the groundwater, and therefore if other remediation technologies are needed. The attached figures include the soil and groundwater evaluation maps from the July 2003 Phase II. Also included is the proposed sampling and trenching plan locations.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Impacted soils will be disposed of at an offsite location, or landfarmed either onsite or offsite pending COGCC approval. Impacted groundwater removed will be disposed of at an offsite facility or may be placed in the tank battery tanks.

The anticipated completion date below is based on the potential need for 4 quarters of monitoring following the completion of the proposed activity, if necessary.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 7/16/04

Date Site Investigation Completed: 3/15/05

Date Remediation Plan Submitted: 7/13/04

Remediation Start Date: 7/16/04

Anticipated Completion Date: 4/15/05

Actual Completion Date:

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and

Print Name:

JOHN MATTHEW Sen BLUE CHIP

Signed:

John Mahony

Title:

ENVIR. CONSULTANT

Date:

2/20/2004

OGCC Approved:

Title:

Date:

TABLE I
35th AVENUE AND 37th STREET OIL/GAS WELL FACILITY
EVANS, COLORADO
PROJECT NO. 03-1-434
SOIL SAMPLE ANALYTICAL RESULTS
OF BTEX, TVPH, and TEPH
(listed in mg/Kg)

ANALYSIS & SAMPLE ID	BTEX	TVPH	TEPH
B1-10'	BTEX-ND	ND	ND
FLOWLINE COMPOSITE- 4'	BT-ND E-0.24 X-0.45	41	ND
B9-5'	B-3.3 T-49 E-17 X-200	2,900	780
B17-12'	BT-ND E-0.57 X-0.93	95	ND
B21-9' (mis-numbered) B-26-9'	B-1.5 T-11 E-1.1 X-20.1	330	47
B15-5'	B-0.32 T-0.64 E-1.9 X-3.5	420	ND
MW6-9'	BTEX-ND	ND	ND
MW7-9'	BTEX-ND	ND	ND
MW8-9'	B-23 T-120 E-11 X-201	3,300	470
MW9-11'	B-0.3 T-0.74 E-ND X-0.94	ND	ND

ND = Not Detected
BTEX = Benzene, Toluene, Ethylbenzene, total Xylenes by EPA Method 80218
TVPH = Total Volatile Petroleum Hydrocarbons by EPA Method 8015 Modified
TEPH = Total Extractable Petroleum Hydrocarbons by EPA Method 8015 Modified
Bold = Exceeding Tier 1 Risk-Based Screening Levels

TABLE 2
 35th AVENUE AND 37th STREET OIL/GAS WELLFACILITY
 EVANS, COLORADO
 PROJECT NO. 03-1-434
 GROUND WATER SAMPLE ANALYTICAL RESULTS
 OF BTEX, TVPH, and TEPH
 (listed in ug/l)

ANALYSIS & SAMPLE ID	BTEX	TVPH	TEPH
MW2	B-270 T-470 E-36 X-650	4,300	710
MW3	B-1,200 T-390 E-ND X-610	5,600	750
MW4	BTEX-ND	NA	NA
MW5	BTEX-ND	NA5	NA
MW6	BTEX-ND	NA	NA
MW7'	BTEX-ND	NA	NA

NA = Not Analyzed

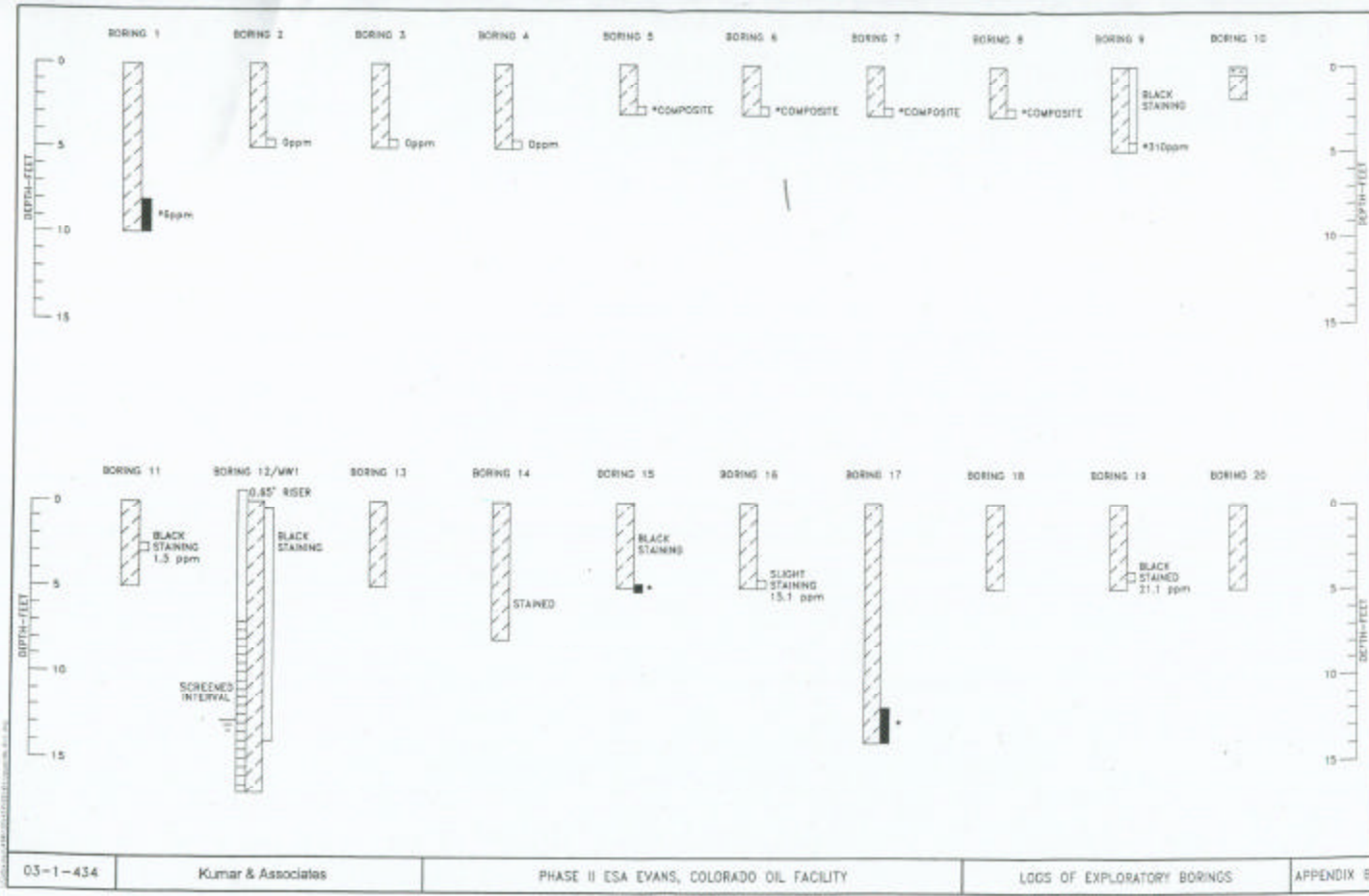
ND = Not Detected

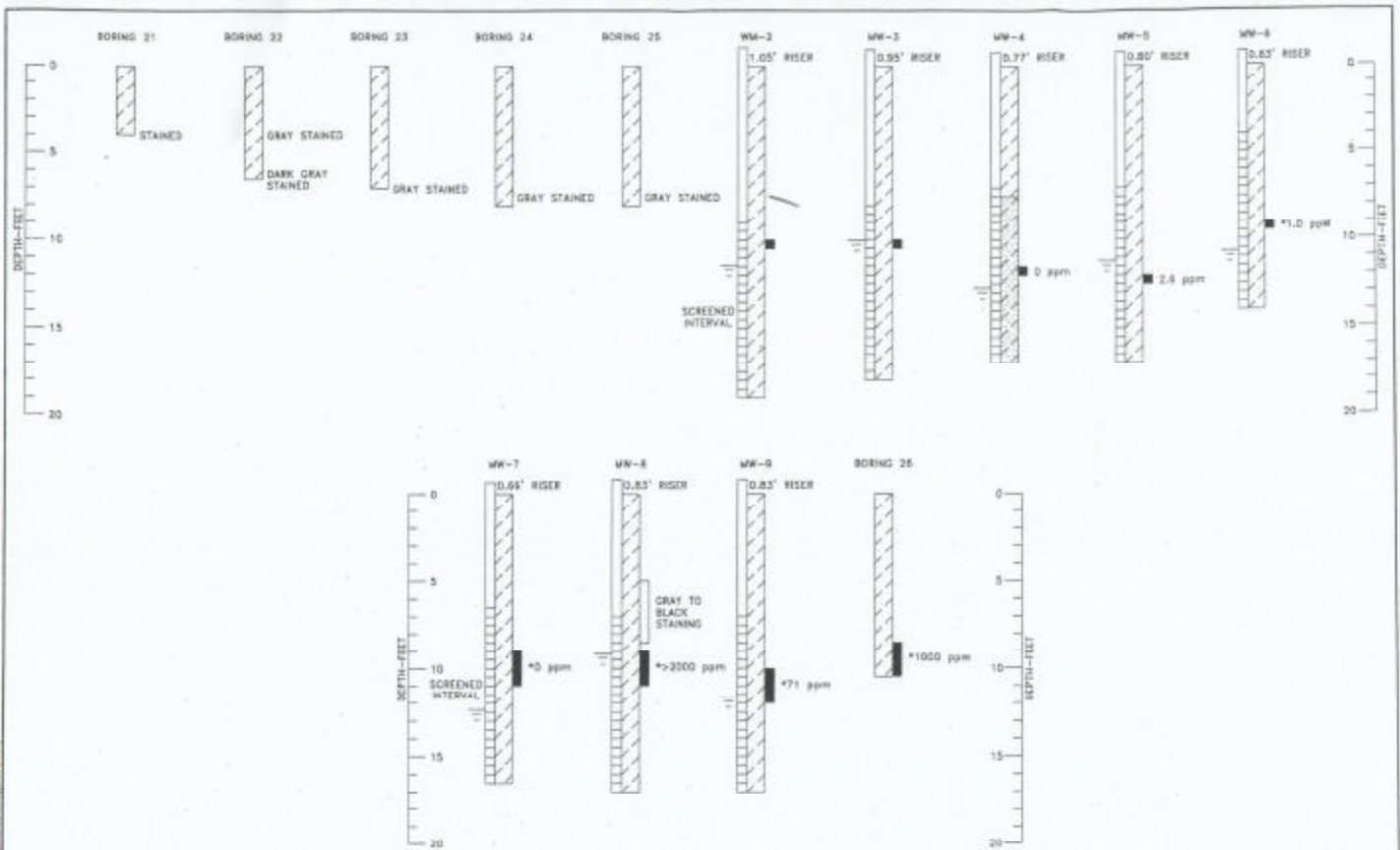
BTEX = Benzene, Toluene, Ethylbenzene, total Xylenes by EPA Method 8021B

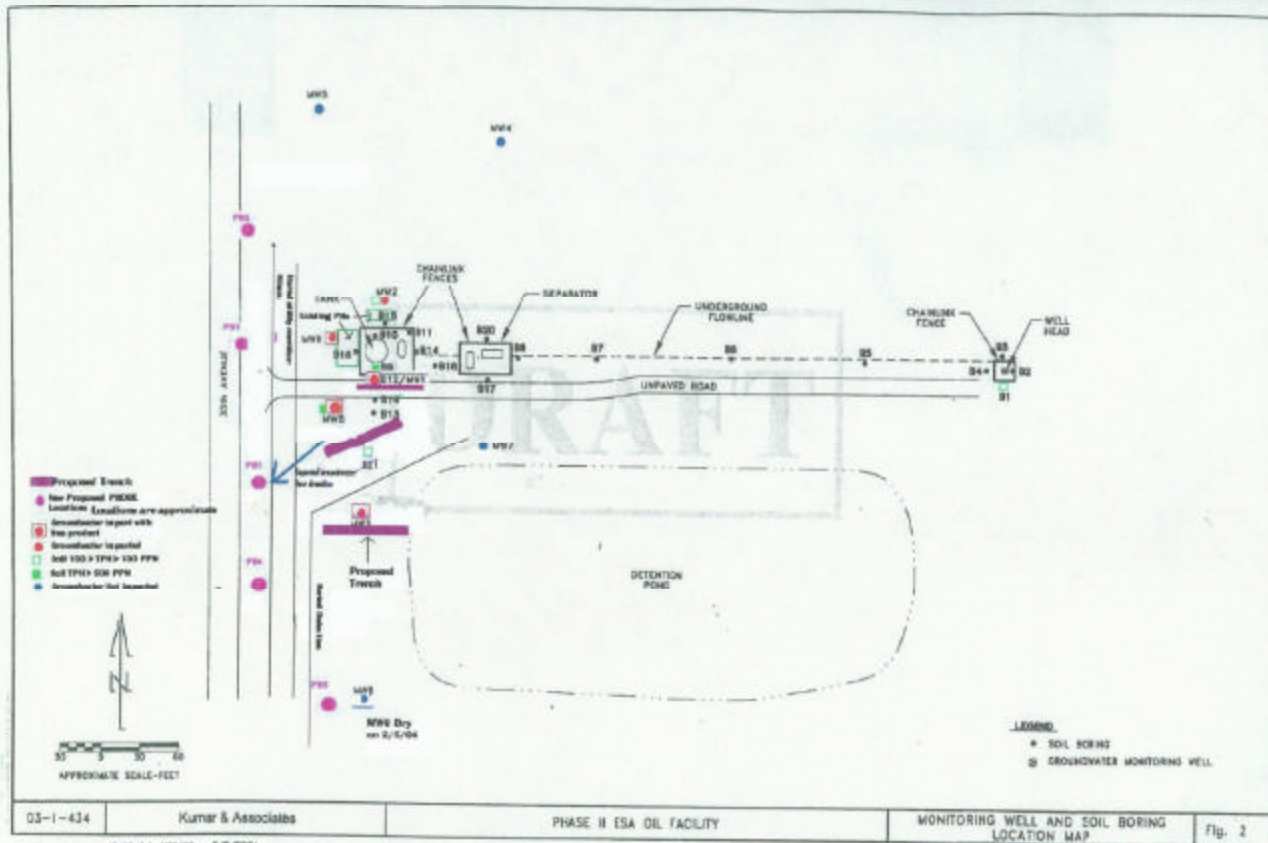
TVPH = Total Volatile Petroleum Hydrocarbons by EPA Method 8015 Modified

TEPH = Total Extractable Petroleum Hydrocarbons by EPA Method 8015 Modified

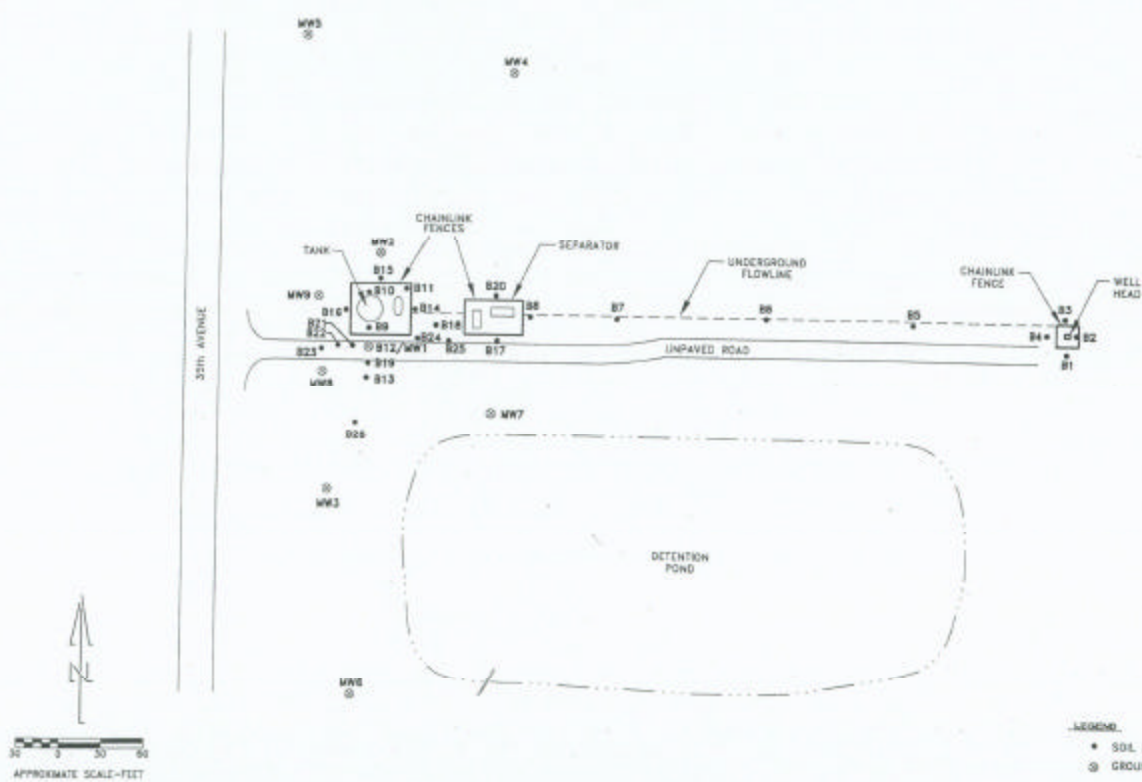
Bold = Exceeding CDPHE Ground Water Standard



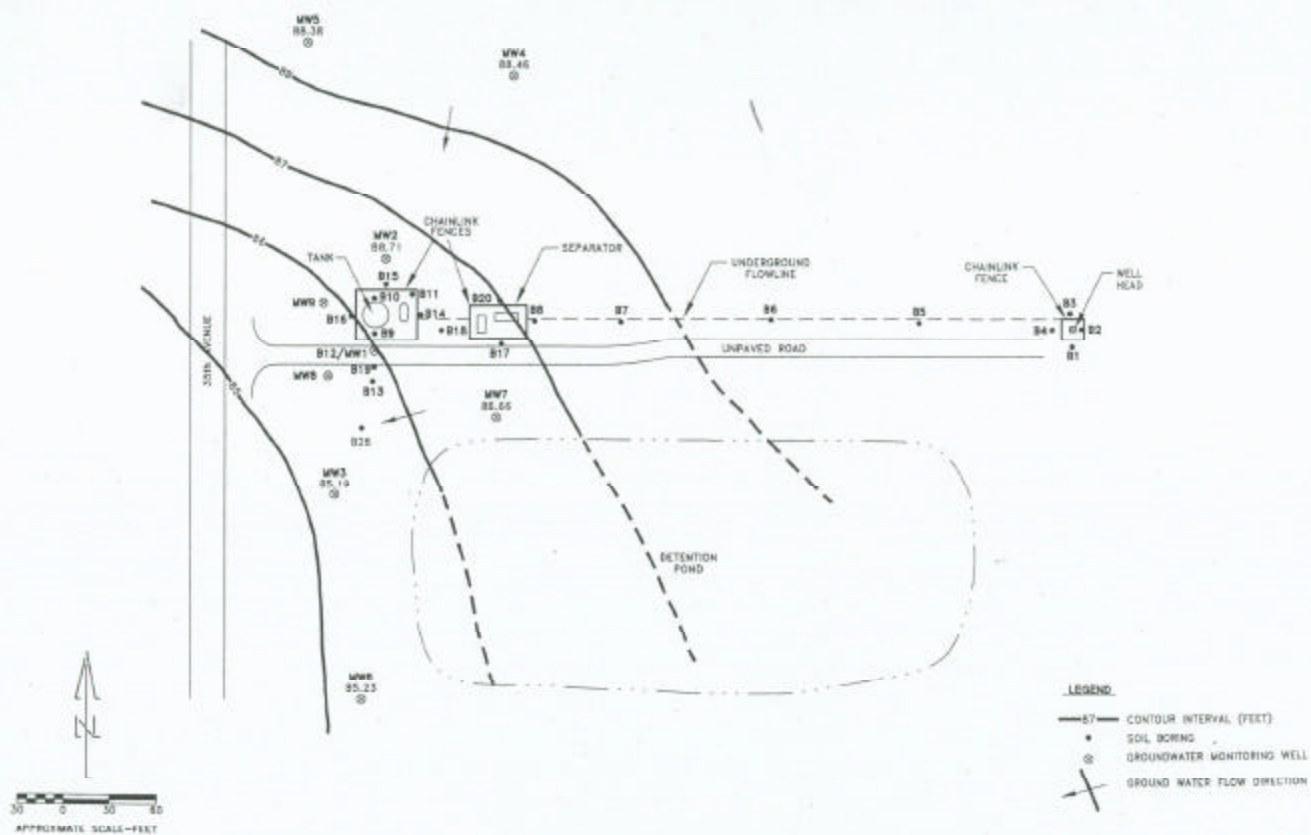


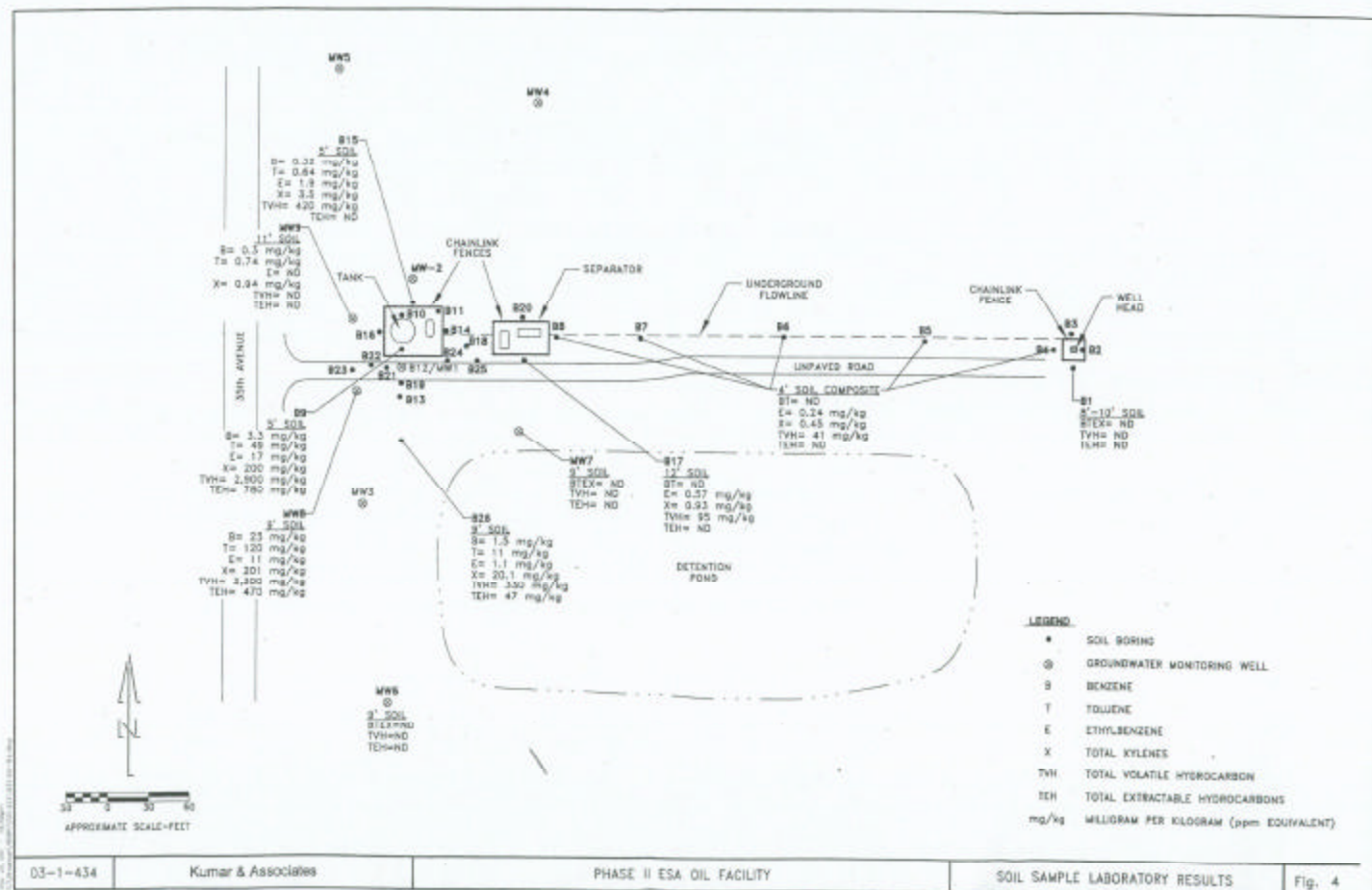


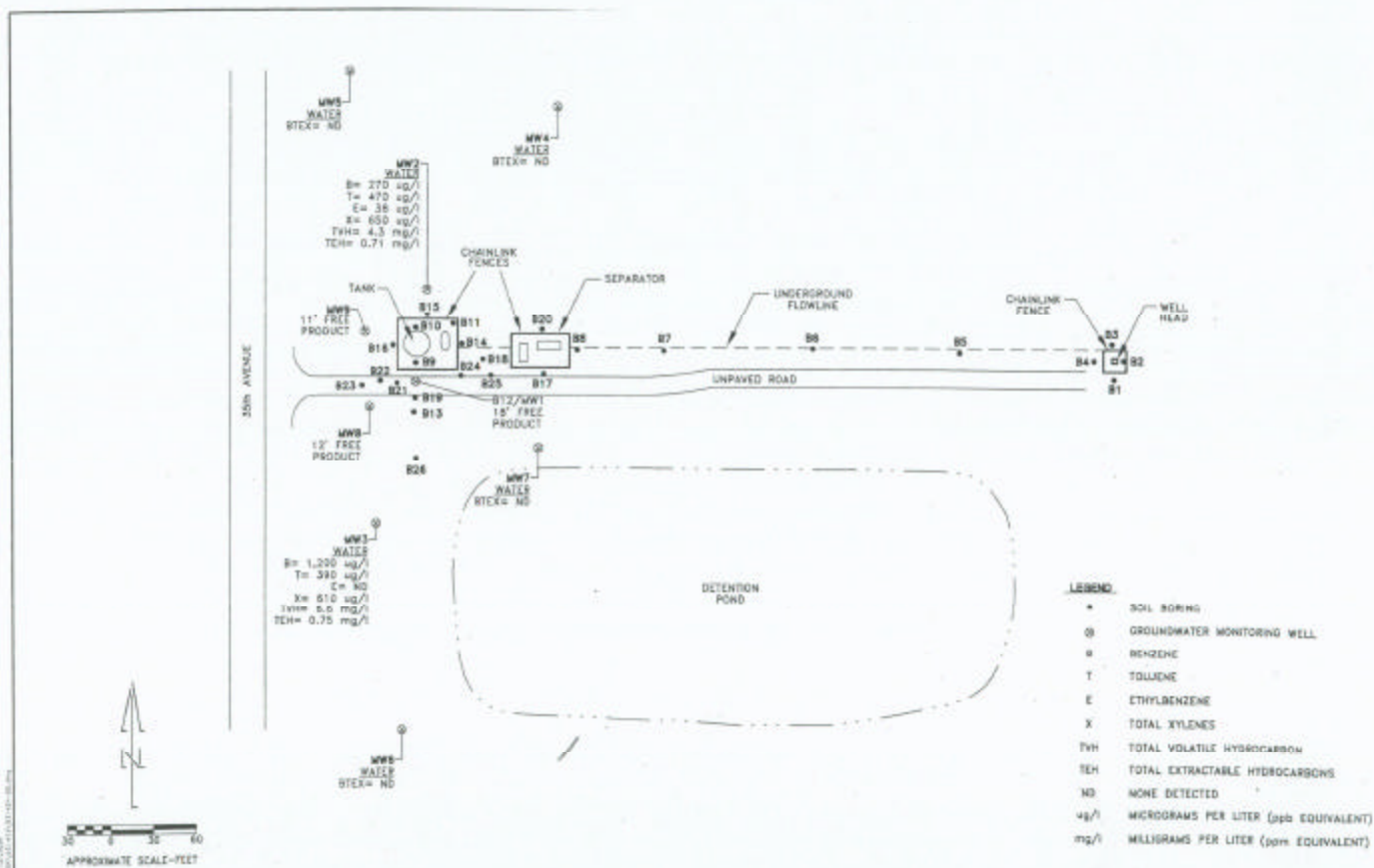
**PROPOSED MONITORING WELLS AND EXCAVATION
TRENCH INVESTIGATION SCHEMATIC**



LEGEND
 • SOIL BORING
 ⊙ GROUNDWATER MONITORING WELL







5015 Ingersoll Place, Boulder, CO 80303
970-336-1000
303-444-4515
970-346-3777 fax
303-444-5624 fax

KEITH M. CROUCH, P.C.

Fax

To: Randall From: Keith M. Crouch, Esq.
Fax: 303-894-2109 Pages: 12
Phone: _____ Date: _____
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• Comments:

Draft Report form 27 please deliver
Keith

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