AP - 29

STAGE 1 & 2 WORKPLANS

DATE:
July, 2001

AP29

E.O.T.T. ENERGY PIPELINE

SOIL AND GROUND WATER REMEDIATION PLAN

FOR THE

KIMBROUGH SWEET SITE
Ref.# 2000-10757

SW¼ NE¼ Sec3, T18S, R37E,
~1.8 miles west of Humble City and
7 mile northwest of Hobbs
Lea County, New Mexico
Latitude: 32°46'48"N Longitude: 103°14'18"W

July 2001

Prepared by

Environmental Plus, Inc.
1324 North Main Street
P.O. Box 1558
Eunice, New Mexico 88231
Tele 505•394•3481 FAX 505•394•2601

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1.0 INTRODUCTION

Environmental Plus, Inc. (EPI), on behalf of E.O.T.T. Energy Corp. (EOTT), hereby submits this Soil and Ground Water Remediation Plan for the Kimbrough Sweet Site located in Lea County, in Unit Letter G, Section 3, Township 18 South, Range 37 East. This plan will serve as a "Work Plan Supplement" as referenced in the draft "General Work Plan for Remediation of EOTT Pipeline Spills, Leaks, and Releases in New Mexico" approved by the New Mexico Oil Conservation Division (NMOCD) on August 1, 2000.

2.0 "EOTT POINT OF CONTACT"

The EOTT "Point of Contact" for this project is:

Mr. Frank Hernandez
District Environmental Supervisor
E.O.T.T. Energy Pipeline
5805 E. Highway 80, Midland, Texas 79701
P.O. Box 1660, Midland, Texas 79702

3.0 PRELIMINARY INVESTIGATION

The initial New Mexico Oil Conservation Division (NMOCD) notification form C-141 submitted to the NMOCD by EOTT reported an unknown volume of crude oil released with 0 barrels recovered. Soil borings at the site, delineated a crude oil contaminated soil column in excess of the NMOCD remedial goals approximately 120' in diameter centered around the leak origin extending vertically to the ground water. A 12" thickness of non-aqueous phase hydrocarbon was observed on the surface of the ground water at approximately 47' bgs in excess of 20 NMAC 6.2.3103, i.e., "Non-aqueous phase liquid shall not be present floating atop or immersed within ground water, as can be reasonably measured." Consistent with the notification requirements of 19 NMAC 15.116, the NMOCD offices in Santa Fe and Hobbs, New Mexico were notified of the impact on March 5, 2001. The sample location map, original laboratory analytical reports, data summaries, and illustrations are provided in Attachment I.

3.1 MITIGATION

To mitigate continued ground water impact, the decision was made May 2001 to excavate the grossly contaminated soil down to the 15'bgs interval, shred to aerate, apply bio-remediation accelerants, and stockpile on 10 mil plastic and is consistent with the soil remediation strategy discussed in section 3.2. The initial soil volume estimate was based on the affected area perimeter and was calculated to be 8,674 yd^3, however during excavation of the site, an additional 7,869 yd^3 of contaminated soil was identified and removed.

3.2 SOIL REMEDIATION STRATEGY

The most reasonable remediation strategy is one that considers effectiveness, timeliness, efficiency, and safety of the process. For the purpose of discussion, removal of 100% of the source term would require an excavation with ramped ingress/egress to be constructed with a diameter of at least 225' and depth of 47'. For an excavation >20'bgs, the Occupational Safety and Health Administration (OSHA) requires that a Professional Engineer design and certify an excavation safety plan. Sloping and benching requires moving clean soil. Similarly, deep excavations require extended periods of time to complete. While removal is the most effective remediation alternative it is not appropriate for this site because it is not timely, efficient, nor inherently safe. It is reasonable

therefore to manage the near surface contaminated soil, i.e., <15'bgs differently than contaminated soil >15'bgs. It is proposed to install an impermeable compacted clay barrier at the 15'bgs interval to isolate the soil >15'bgs. The treated soil currently stockpiled on site will be place on top of the barrier forming an "in-situ" passive bio-cell. The barrier provides the necessary containment of vertical migration of the source terms and provides for and supports a viable conservative "risk assessment" of the remaining source term on either side of the barrier.

how thick? how impermeable? final cleanup std?

3.2.1 Remediation of Soil >15'bgs

It is proposed that an oversized compacted impermeable clay barrier be installed above the source term at roughly the 15' bgs interval to isolate the crude oil contaminated soil >15'bgs. The barrier will be installed in 1-foot thick lifts with the density of each lift tested to be at least 95% of the Proctor for the clay. Currently, it is contemplated to remediate the contaminated soil >15'bgs by installing a vapor recovery system with a single extraction point and eight perimeter induction points with alternating screened intervals. Monthly monitoring of the exhaust with a calibrated photoionization detector (PID) will document attenuation.

to what level? 100 ppm?

3.2.2 Remediation of Soil <15'bgs

too thick for bio?

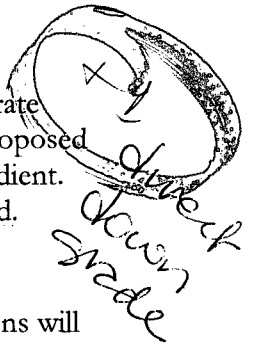
During the Mitigation Phase of the project, contaminated soil was excavated, mechanically shredded and aerated, and treated with bio-enhancing nutrients and microbes. Currently this soil is stockpiled on plastic within the fenced site. The attenuation process has begun. It is proposed that this treated soil be placed back into the excavated area overlaying the impermeable barrier to be install at 15'bgs. The bio-cell thus constructed would be monitored quarterly to document attenuation and ultimate achievement of the NMOCD remedial goals. The development of a conservative "risk assessment" taking credit for the barrier may indicate acceptable concentrations for the constituents of concern, i.e., Total Petroleum Hydrocarbon, Benzene, Toluene, Ethylbenzene, and Xylenes that are >the NMOCD guideline thresholds.

C2P?

3.3 Interim Ground Water Investigation

4

To guide the placement of the extraction/recovery wells, it is necessary to install 3 perimeter monitor wells as soon as possible. These wells will provide, after the engineered survey, accurate references for determining the strike and dip of the ground water gradient at the site. The proposed locations form a triangle with one up dip and two down dip of the assumed ground water gradient. The well siting map is included as Attachment II. Plume delineation wells will also be installed.



approval?

3.4 Product Recovery

Subsequent to the installation of the perimeter monitor wells, the recovery system well locations will be proposed and after consensus with the NMOCD, installed and activated. The recovery pumps will be pneumatically powered internally sensing skimmer type pumps capable of up to two gallons per minute and should initially minimize water production. These wells will also serve as ground water monitor wells to define the initial contamination plume and quarterly monitoring access points. All wells are to be 4" PVC installed according to the RCRA monitoring well guidelines consistent with the NMOCD protocols.

3.5 Ground Water Remediation

where? how?

As product recovery decreases and ground water increases, it is proposed that the water be aerated and reintroduced into the saturated zone. This will promote volatilization and bio-attenuation.

after testing?

evap pond (lined)

needs DP
Class II well

haul it off

4.0 SITE GENERATED WASTES

Wastes generated during installation, investigation, monitoring, and recovery activities will be contained appropriately and disposed of in an approved NMOCD facility. If a waste has a recycling potential, the NMOCD will be petitioned to do so.

5.0 QUALITY ASSURANCE PROJECT PLAN

This Quality Assurance Plan (QAP) will ensure the quality and usability of information and data used to support a successful site investigation and subsequent environmental management decisions.

5.1 PROJECT SAFETY

Hazards that will be encountered at this site include the following;

- Moving equipment
- Buried pipelines
- Rotary Equipment
- Highway ingress/egress
- Excavation
- Potential Hydrogen Sulfide Gas

Prior to drilling or excavation, NEW MEXICO ONE CALL will be notified of activities, who will provide a list of Companies they will notify and a ONE CALL confirmation number. Employees and subcontractors will be required to confirm current training in these hazards. Standard personal protective equipment will include;

- Personal H_2S Monitor
- Hard-hat
- Steel Toed Boots/Shoes and gloves

5.1.1 Historical Use

The area has been used historically for livestock grazing and access to oil and gas production facilities.

5.1.2 Site Description

The site is owned by Gerald Pistole, situated in the SW¼ of the NE¼ of Sec3, T18S, R37E, and is ~1.8 miles west of Humble City and 7 mile northwest of Hobbs, Lea County, New Mexico. The Latitude is 32°46'48"N and Longitude 103°14'18"W. The EOTT site reference identification number is "2000-10757." The visibly contaminated surface area, i.e., 15,613 ft^2 was presumed initially to be the horizontal extent of contamination. The leak occurred in a low area with an active population of "Black-tailed Prairie Dogs." The line apparently failed due to internal corrosion and was repaired with a line clamp. Following repair, an estimated 1200 yd^3 of the saturated surface soil was pushed into a pile in the affected area.

5.1.3 Ecological Description

The area is typical of the Lower Great Plains Biome consisting primarily of Honey Mesquite (Prosopis glandulosa) along with typical desert grasses and weeds. Netleaf Hackberry trees occur in the lower drainages. Mammals represented include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black-tailed Prairie Dog, Black-tailed

Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

5.2 Environmental Media Characterization

Chemical parameters of the soil and ground water will be characterized consistent with the New Mexico Oil Conservation Division (NMOCD) guidelines published in the following documents as applicable;

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Normally acceptable thresholds for contaminants of concern (CoC), i.e., TPH and BTEX are determined based on the following; PAH

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to down gradient surface water bodies. how? what methods?

~~However, site-specific risk-based thresholds will be developed.~~ QA?

5.2.1 Area Ground Water Levels

According to the New Mexico State Engineers Office, the uppermost aquifer is the Ogallala and occurs in the area between 36' and 47' bgs. The water level at the site is 47.3'bgs.

5.2.2 Water Well Inventory

The New Mexico State Engineers Office in Roswell, New Mexico has the following wells recorded. There are no wells recorded in Section 3 T18S and R37E.

Township	Range	Section	Feet bgs
18S	37E	1	47
18S	37E	5	36
17S	37E	34	76
17S	37E	34	62
17S	37E	34	55
17S	37E	34	60

5.2.3 Water Wells Actually or Potentially Affected by the Pollution

Included in Attachment IV is a map of area wells. A reconnaissance survey will be conducted to identify unknown or actually or potentially affected water wells in the area.

5.2.4 Aquifer Recharge

The Ogallala in this region is maintained through surface recharge during precipitation events.

5.2.5 Depth to Ground Water Calculation

The NMOCD requires the site be ranked to determine which soil TPH threshold will apply and defines depth to ground water as, "the vertical distance from the lowermost contaminants to the seasonal high water elevation of the ground water." The uppermost occurrence of ground water is at 47.3'bgs. The lower most contamination occurs at the interface of the vadose zone and the water table. The calculated NMOCD depth to ground water is essentially 0.0' bgs.

5.2.6 Ground Water Gradient

The spill area is located within a southeastwardly trended drainage. The ground water gradient is expected to have a similar tilt.

5.2.7 Wellhead Protection Area

There are no water wells within 1000' of the site. 1 mile ?

5.2.8 Distance to Nearest Surface Water Body

None present.

5.2.9 Seasonal Stream Flow Characteristics

There are no streams located at the site, however, during rain events the site drains southeastward down the valley/draw.

5.3 Data Quality Objectives

For analytical information derived from samples, the following quality controls will be documented and verified. If data is within the specifications it will be deemed quantitative and acceptable for use in making environmental management decisions.

- Laboratory data must have extraction recovery for TPH, BTEX and general chemistry parameters ≤30.0%. Or a "%Extraction Accuracy " between 70 and 130%.
- Laboratory data must have <30% Relative Percent Difference or a "%Instrument Accuracy" between 70 and 130%.
- Field headspace analyses must be supported with instrument calibration data and calibration gas certification.

5.3.1 Methodology

Collecting representative site samples and information requires that the sampling and observational processes and procedures be implemented within strict bounds. These control procedures will further ensure the quality of site data and information and are consistent with the EOTT standard operating procedures as referenced in the NMOCD approved "General Work Plan for Remediation of EOTT Pipeline Spills, Leaks, and Releases in New Mexico." Likewise, personnel will implement standard environmental and occupational safety protocols.

5.3.1.1 Borehole Drilling, Lithologic Sampling, Logging, and Abandonment

Boreholes will be located strategically to best determine vertical and horizontal extent of contamination in the vadose zone and ground water. Borelogs will be developed for each boring noting site lithology. Likewise, laboratory samples may be collected to determine more detailed lithologic characteristics, i.e., porosity, transmissivity, etc. Each borehole not developed into a

permanent monitor well will be plugged with Sodium Bentonite in accordance with the NMOCD guidelines.

5.3.1.1.1 General Drilling Procedures

The investigation will use the Environmental Plus, Inc. drill rig with hollow stem auger and "thin-wall probe" method of discrete sampling.

5.3.1.1.2 Soil Sampling and Logging

Upon advancing to the desired sampling interval the probe will be extended through the end of the hollow stem auger and pushed into the soil matrix to collect the sample. As the 1.5" X 48" stainless steel probe with a vinyl sampling sleeve is detached from the sampling bar, it will be immediately placed on the rack and logged. A 4 oz. sample will then be decanted into the sample jar for refrigeration and preparation with the remainder (~1 Kg) placed in a 1 gallon Ziplock bag, warmed to ambient ~ 70-80 °F and VOC Headspace concentration measured and recorded. All pertinent information will be recorded on the field borelog data sheet.

5.3.1.1.3 Monitor and Pollution Abatement Well Installation

Boreholes exhibiting contamination from the surface to ground water will be abandoned. Those advanced down gradient of the site for the purpose of plume delineation and found to be unimpacted will be completed and developed as monitor wells. Some boreholes may be temporarily abandoned, i.e., covered but not plugged, for future development as pollution abatement wells. The New Mexico State Engineers Office will be notified in writing of all pollution abatement well installations and water rights acquired. All monitor and pollution abatement wells will be installed and developed in accordance with the NMOCD guidelines.

5.3.1.1.4 Ground Water Sampling — NO Sooner than

Ground water will be sampled within 24 hours of well development using a new and certifiably clean one-liter weighted baler. The water will be immediately decanted into the appropriate containers and prepared for ascension to the laboratory.

5.3.1.1.5 Borehole Abandonment — Why?

The boreholes will be filled with a mixture of distilled water and Sodium Bentonite and a wooden marker denoting the borehole number driven into the center of each backfilled hole.

5.3.1.2 Sample Handling

Soil and water samples will be collected and prepared in accordance with accepted ASTM and EPA SW846 methods.

5.3.1.3 Sampling protocols

1. Decontaminate sampling equipment and area with Alconox distilled water after each sample.
2. Prepare samples and refrigerate as soon as practicable.

Duplicates or blanks may be submitted to the laboratory to establish reproducibility and identify laboratory contamination, respectively.

5.3.1.4 Sample Containers

Laboratory and field analyses of soil and water require specific containers and are listed in the matrix below.

	TPH	BTEX	VOC Headspace	Metals	PAH	General Chemistry
Soil	4 oz. Jars with Teflon seal	4 oz. Jars with Teflon seal	1-gallon Ziplock® bags			
Water	1 liter amber glass w/HCL	2-40 ml VOA vials w/ HCL		16 oz. Plastic w/ 1ml HNO_3	1 liter Amber Glass	1 liter Plastic

5.3.1.5 Sample Custody

All analytical request forms will be completed and signatured by EPI as sampler. EPI personnel will ascension the samples to the laboratory sample-receiving personnel under chain-of-custody signature.

5.3.1.6 Quality Control Samples

Quality control samples will be analyzed to ensure data quality.

5.3.1.6.1 Field Blank

A field blank for soil or water is not deemed necessary.

5.3.1.6.2 Equipment Blank

None will be collected.

5.3.1.6.3 Field Duplicate or Co-located Samples

For water and soil samples, one duplicate or co-located sample will be collected for analysis every 10^{th} sample. or 1 per day

5.3.1.6.4 Trip Blank

A laboratory prepared trip blank will accompany each water sample batch.

5.3.1.7 Field Measurements

The VOC Headspace concentration for each soil sample will be measured. The instrument used will be the Ultra-Rae PID manufactured by Rae Systems. The calibration gas will be 100.0 ppm isobutylene standard from Scott Specialty Gases, Freemont, Colorado.

5.3.1.7.1 Equipment Calibration and Quality Control

The PID ~~will be calibrated at least 3 times daily and~~ checked with the calibration gas hourly. When a check with ~~the calibration gas indicates the instrument reading~~ is 10 ppm too high or low it will be calibrated. Variation in the daytime ambient temperature ~~will cause the~~ variation.

5.3.1.7.2 Equipment Maintenance and Decontamination

All sampling and survey equipment will be routinely decontaminated between samples. Nitrile gloves will be worn and changed with each sampling iteration.

decon water ?

5.3.1.7.3 Ground Water Level Measurements

Ground water levels will be taken with an accurate water level meter at each borehole where ground water is encountered and may require the use of an interface meter. Levels will be recorded as "feet below ground surface" to the nearest ".1 ft." and will be recorded as "TOC," i.e., top of casing.

5.3.1.8 Analyses

Soil and ground water will be analyzed in accordance with the following EPA Methods.

The analytical suite for soil samples will include;

- TPH (EPA method 8015M) RRO?
- BTEX (EPA method 8020 or equivalent)
- ~~SPLP for selected samples~~

The analytical suite for water samples will include:

- TPH (EPA method 8015B)
- BTEX (EPA method 8021B)
- Total Dissolved Solids (EPA method 150.1) ← Cations & anions ? Fe Mn
- PAH (EPA method 8270)

5.3.1.9 Sample Identification

Sample identification numbers will be designated as follows;

Site: EOTT LL	Date	Borehole #	Interval bgs	Qualification: Cutting/Probe Sample
KS	June 3, 2001	1	20'	C or P

Example: KS6301BH1-20C

5.3.1.10 Data Evaluation

All data will be reviewed based on the Data Quality Objectives in section 3.8.1.

5.4 Identification of Remedial Action Levels

Typical remedial goals for soil in this area which would normally be in accordance with the NMOCD published guideline thresholds could justifiably be increased based on the site specific risk based assessment.

5.4.1 Site Ranking

The area has the following score and site ranking;
Depth to Groundwater / <50' = 20
Wellhead Protection Area / <200' = 0
Distance to Surface Water Body / <200' = 0
Site Ranking = 20

5.4.2 Remedial Action Levels

The typical remedial action objectives for soil at this site according to the NMOCD guidelines would be as follows.

- TPH – 100 mg/Kg
- BTEX – 50 mg/Kg
- Benzene – 10 mg/Kg

However, objective site specific risk based thresholds will be developed. The WQCC ground water MCLs for COCs will apply to site ground water.

5.5 MONITORING PROGRAM (19NMAC15.A.19.E(3)C)

The Monitoring Program will be a part of this Soil and Ground Water Remediation Plan. Data will be summarized into quarterly reports documenting progress and status and submitted to the NMOCD Environmental Bureau Santa Fe and Hobbs offices.

5.5.1 Ground Water Monitoring

The monitor wells installed at the site will be sampled at least quarterly for TPH and BTEX.

FAIA yr -1

5.5.2 Soil Bio-Cell Monitoring

The Bio-Cell soil will be monitored quarterly for TPH and BTEX. Samples will be obtained at 5' bgs intervals in quadrants separated by the cardinal radians.

too thick
Spread 2 ft
thick ?

Attachment I: Preliminary Assessment Information

E.O.T.T. Energy Pipeline
Kimbrough Sweet Data Summary

Borehole/ Sample Location	Sample Description	Date	Sampling Interval (Ft. BGS)	Lithology	Sample ID#	Headspace VOC (ppm)	GRO[1] mg/kg	DRO[2] mg/kg	GRO+DRO TPH[7] - mg/kg	BTEX[3] mg/kg	Benzene mg/kg	Toluene mg/kg	Ehtyl Benzene mg/kg	M,P-Xylene mg/kg	O-Xylene mg/kg	Chloride mg/kg
							Detection Limit is <10 mg/kg			Detection Limits are <0.025						
Borehole 1	Discrete	3/5/2001	2	Black Oily Sand	KSS3501BH1-2	1647.0	2219	3654	5873	303.800	0.500	99.4	34.700	131.000	38.200	NA[4]
	Discrete	3/5/2001	5	Light Brown Oily Sand	KSS3501BH1-5	857.0	8253	11600	19853	1867.000	219.000	714.000	290.000	481.000	163.000	NA
	Discrete	3/5/2001	10	Light Brown Sand	KSS3501BH1-10	1024.0	6655	11575	18230	637.000	57.200	221.000	94.200	210.000	54.600	NA
	Discrete	3/5/2001	15	Light Brown Sand	KSS3501BH1-15	1407.0	3457	6323	9780	471.100	30.400	152.000	77.200	159.000	52.500	NA
	Discrete	3/5/2001	20	Brown/Gray Sand	KSS3501BH1-20	1800.0	1736	6314	8050	120.620	1.020	23.600	25.300	53.200	17.500	NA
	Discrete	3/5/2001	25	Light Brown Sand	KSS3501BH1-25	1200.0	2278	4512	6790	267.540	8.040	83.400	46.600	96.200	33.300	NA
	Discrete	3/5/2001	30	Brown Sand	KSS3501BH1-30	1158.0	4210	8135	12345	374.200	13.500	127.000	63.300	131.000	39.400	NA
	Discrete	3/5/2001	35	Brown Sand	KSS3501BH1-35	1300.0	2870	5324	8194	319.120	7.420	105.000	51.400	117.000	38.300	NA
	Discrete	3/5/2001	40	Brown Sand	KSS3501BH1-40	1075.0	3389	6993	10382	242.580	8.180	72.700	40.300	89.900	31.500	NA
	Discrete	3/5/2001	45	Brown Sand	KSS3501BH1-45	1040.0	3140	5980	9120	312.900	11.700	100.000	49.300	114.000	37.900	NA
Borehole 2	Discrete	3/14/2001	2	Black Oily Sand	KSS3140IBH2-2	1464.0	5752	18316	24068	668.800	68.400	269.000	70.000	200.000	61.400	NA
	Discrete	3/14/2001	5	Light Brown Oily Sand	KSS3140IBH2-5	1447.0	4312	5961	10273	545.900	62.300	214.000	62.200	164.000	43.400	NA
	Discrete	3/14/2001	10	Light Brown Sand	KSS3140IBH2-10	1393.0	2549	4739	7288	343.700	25.200	112.000	51.300	120.000	35.200	NA
	Discrete	3/14/2001	15	Light Brown Sand	KSS3140IBH2-15	1653.0	3521	8474	11995	279.700	12.500	82.400	46.300	108.000	30.500	NA
	Discrete	3/14/2001	20	Light Brown Sand	KSS3140IBH2-20	1643.0	2947	10137	13084	194.020	3.120	48.800	33.800	79.600	28.700	NA
	Discrete	3/14/2001	25	Light Brown Sand	KSS3140IBH2-25	1121.0	2769	5610	8379	278.600	10.300	88.600	49.900	102.000	27.800	NA
	Discrete	3/14/2001	30	Brown Sand	KSS3140IBH2-30	914.0	3341	6584	9925	339.700	11.400	109.000	57.900	126.000	35.400	NA
	Discrete	3/14/2001	35	Brown Sand	KSS3140IBH2-35	883.0	3233	7203	10436	220.660	6.960	68.700	35.800	81.400	27.800	NA
	Discrete	3/14/2001	40	Brown Sand	KSS3140IBH2-40	756.0	2602	5726	8328	382.450	5.850	115.000	64.100	149.000	48.500	NA
	Discrete	3/14/2001	45	Brown Sand	KSS3140IBH2-45	675.0	3159	6595	9754	256.250	7.150	83.400	42.500	92.400	30.800	NA
Borehole 3	Discrete	3/7/2001	2	Black Oily Sand	KSS370IBH3-2	749.0	9484	60246	69730	307.640	8.840	72.800	58.000	120.000	48.000	NA
	Discrete	3/7/2001	5	Brown/Gray Sand	KSS370IBH3-5	1853.0	7532	14845	22377	1115.000	64.000	347.000	205.000	372.000	127.000	NA
	Discrete	3/7/2001	10	Brown Sand	KSS370IBH3-10	1805.0	6359	11377	17736	773.800	50.900	257.000	128.000	251.000	86.900	NA
	Discrete	3/7/2001	15	Brown Sand	KSS370IBH3-15	1664.0	9322	18515	27837	782.600	37.200	243.000	135.000	273.000	94.400	NA
	Discrete	3/7/2001	20	Brown/Gray Sand	KSS370IBH3-20	1981.0	4399	12818	17217	281.630	5.030	74.800	51.400	117.000	33.400	NA
	Discrete	3/7/2001	25	Tan Sand	KSS370IBH3-25	1540.0	3321	6830	10151	278.160	7.160	94.300	41.700	93.400	41.600	NA
	Discrete	3/7/2001	30	Tan Sand	KSS370IBH3-30	775.0	3257	6198	9455	359.200	10.400	127.000	51.200	118.000	52.600	NA
	Discrete	3/7/2001	35	Tan Sand	KSS370IBH3-35	627.0	789	2148	2937	55.295	0.165	10.200	9.130	24.600	11.200	NA
	Discrete	3/7/2001	40	Tan Sand	KSS370IBH3-40	610	3118	6616	9734	335.200	7.400	114.000	46.300	117.000	50.500	NA
	Discrete	3/7/2001	45	Tan Sand	KSS370IBH3-45	700.0	595	29002	29597	251.570	4.870	83.900	35.300	90.500	37.000	NA
Borehole 4	Discrete	3/7/2001	2	Black Oily Sand	KSS370IBH4-2	194.0	168	810	978	8.243	0.100	2.070	0.593	2.920	2.560	NA
	Discrete	3/7/2001	5	Brown/Gray Sand	KSS370IBH4-5	11.4	18	435	453	0.169	0.025	0.043	0.028	0.048	0.025	NA
	Discrete	3/7/2001	10	Light Brown Sand	KSS370IBH4-10	2.0	10	10	20	0.125	0.025	0.025	0.025	0.025	0.025	NA
	Discrete	3/7/2001	15	Light Brown Sand	KSS370IBH4-15	1.4	10	10	20	0.134	0.025	0.034	0.025	0.025	0.025	NA
	Discrete	3/7/2001	20	Tan Sand	KSS370IBH4-20	0.3	10	103	113	0.125	0.025	0.025	0.025	0.025	0.025	NA
Borehole 5	Discrete	3/13/2001	2	Black Oily Sand	KSS3130IBH5-2	2165.0	6510	17680	24190	615.470	9.670	191.000	109.000	218.000	87.800	NA
	Discrete	3/13/2001	5	Brown/Gray Sand	KSS3130IBH5-5	2041.0	5305	10168	15473	743.200	30.200	294.000	108.000	225.000	86.000	NA
	Discrete	3/13/2001	10	Brown Sand and Rock	KSS3130IBH5-10	1767.0	2560	6432	8992	260.830	6.030	80.200	42.700	90.500	41.400	NA
	Discrete	3/13/2001	15	Light Brown Sand	KSS3130IBH5-15	1379.0	3372	10545	13917	168.800	0.500	43.000	28.600	63.900	32.800	NA
	Discrete	3/13/2001	20	Brown/Gray Sand and Rock	KSS3130IBH5-20	1003.0	572	6176	6748	6.681	0.500	0.851	1.080	2.950	1.300	NA
	Discrete	3/14/2001	25	Light Brown Sand	KSS3140IBH5-25	1011.0	2698	5634	8332	255.230	7.630	90.600	39.200	79.200	38.600	NA
	Discrete	3/14/2001	30	Brown Sand	KSS3140IBH5-30	937.0	2761	5280	8041	294.510	8.410	104.000	42.400	96.500	43.200	NA
	Discrete	3/14/2001	35	Light Brown Sand	KSS3140IBH5-35	924.0	2960	6188	9148	283.220	5.920	87.700	46.800	107.000	35.800	NA
	Discrete	3/14/2001	40	Brown Sand	KSS3140IBH5-40	787.0	3497	8181	11678	235.390	5.790	76.400	41.800	87.700	23.700	NA
	Discrete	3/14/2001	45	Brown Sand	KSS3140IBH5-45	690.0	3230	6534	9764	535.600	12.500	172.000	90.600	195.000	65.500	NA
Borehole 6	Discrete	3/5/2001	2	Black Oily Sand	KSS3501BH6-2	1991.0	3711	10471	14182	326.420	1.820	61.400	56.700	144.000	62.500	NA
	Discrete	3/5/2001	5	Brown Oily Sand	KSS3501BH6-5	2275.0	6292	15437	21729	728.360	7.360	207.000	120.000	287.000	107.000	NA
	Discrete	3/5/2001	10	Light Brown Sand	KSS3501BH6-10	1188.0	708	2647	3355	28.670	0.250	3.300	5.920	12.200	7.000	NA
	Discrete	3/5/2001	15	Tan Sand	KSS3501BH6-15	637.0	28	377	405	0.207	0.025	0.028	0.025	0.088	0.041	NA
	Discrete	3/5/2001	20	Tan Sand	KSS3501BH6-20	100.0	22	246	268	0.135	0.025	0.025	0.025	0.035	0.025	NA
Borehole 7	Discrete	3/6/2001	2	Black Oily Sand	KSS3601BH7-2	128.0	29	279	308	0.753	0.025	0.025	0.097	0.255	0.351	NA
	Discrete	3/6/2001	5	Brownish Gray Sand	KSS3601BH7-5	1881.0	1454	3780	5234	112.050	0.250	18.500	25.600	51.100	16.600	NA
	Discrete	3/6/2001	10	Brownish Gray Sand	KSS3601BH7-10	1072.0	722	2640	3362	31.750	0.250	7.540	6.140	13.200	4.620	NA
	Discrete	3/6/2001	15	Gray Sand	KSS3601BH7-15	382.0	139	616	755	8.170	0.100	1.430	1.550	3.570	1.520	NA
	Discrete	3/6/2001	20	Gray Sand	KSS3601BH7-20	49.7	112	713	825	6.769	0.042	0.917	1.510	3.030	1.270	NA

E.O.T.T. Energy Pipeline
Kimbrough Sweet Data Summary

Borehole/ Sample Location	Sample Description	Date	Sampling Interval (ft. bgs)	Lithology	Sample ID#	Headspace VOC (ppm)	GRO[1] mg/kg	DRO[2] mg/kg	GRO+DRO TPH[7] - mg/kg	BTEX[3] mg/kg	Benzene mg/kg	Toluene mg/kg	Ehtyl Benzene mg/kg	m,p-Xylene mg/kg	o-Xylene mg/kg	Chloride mg/kg
							Detection Limit is <10 mg/kg			Detection Limits are <0.025						
Borehole 8	Discrete	3/6/2001	2	Black Oily Sand	KSS3601BH8-2	16.2	595	29002	29597	0.256	0.067	0.097	*0.025*	0.042	*0.025*	NA
	Discrete	3/6/2001	5	Gray Sand	KSS3601BH8-5	5.6	*10*	*10*	*20*	0.125	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	NA
	Discrete	3/6/2001	10	Light Brown Sand	KSS3601BH8-10	1.7	*10*	*10*	*20*	0.125	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	NA
	Discrete	3/6/2001	15	Tan Sand	KSS3601BH8-15	0.4	*10*	*10*	*20*	0.125	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	NA
Borehole 9	Discrete	3/6/2001	2	Black Oily Sand	KSS3601BH9-2	757.0	7257	37734	44991	173.575	0.675	26.300	29.300	76.500	40.800	NA
	Discrete	3/6/2001	5	Light Brown Sand	KSS3601BH9-5	2318.0	2555	6208	8763	643.490	4.890	167.000	107.000	266.000	98.600	NA
	Discrete	3/6/2001	10	Light Brown Sand	KSS3601BH9-10	800.0	37	319	356	0.609	*0.025*	*0.025*	0.106	0.316	0.137	NA
	Discrete	3/6/2001	15	Tan Sand	KSS3601BH9-15	126.0	10	115	125	0.126	*0.025*	*0.025*	*0.025*	0.026	*0.025*	NA
	Discrete	3/6/2001	20	Tan Sand	KSS3601BH9-20	50.4	.10	43	53	0.125	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	NA
Surface Spoils	Composite	4/25/2001	NA	Brown Sandy Clay-odorous	S4250IKSSPOILS	NA	24994	76655	**101649**	599.520	*1.320*	*105.000*	*62.200*	298.000	*133.000*	397
Untreated Spoils	Composite	7/5/2001	NA	Brown Sand-odorous	KS750IUS	NA	12400	25900	**38300**	626.000	*25.500*	*109.000*	*207.000*	82.500	*202.000*	NA
Excavation West Bottom Hole	Composite	7/5/2001	15	Brown Sand-odorous	KS750IWBHC	NA	1550	9970	**11520**	18.6558	*0.026*	*3.340*	*8.570*	*4.310*	*2.410*	NA
Excavation Middle Bottom Hole	Composite	7/5/2001	10	Brown Sand-odorous	KS750IMBHC	NA	790	5530	**6320**	7.693	*0.953*	*1.520*	*2.690*	*1.300*	*1.230*	NA
Excavation East Bottom Hole	Composite	7/5/2001	8	Brown Sand	KS750IEBHC	NA	*5*	107	112	0.100	*0.020*	*0.020*	*0.020*	*0.020*	*0.020*	NA
Treated Spoils South	Composite	7/5/2001	NA	Brown Sand	KS750ITSS	NA	3620	7590	11210	19.882	*0.0269*	*1.26*	*11.2*	*7.11*	*0.285*	NA
Treated Spoils North	Composite	7/5/2001	NA	Brown Sand	KS750ITSN	NA	2740	4530	7270	3.466	*0.02*	*0.022*	*0.512*	*2.89*	*0.0219*	NA

[1]GRO - Gasoline Range Organics C_6-C_{10}
[2]DRO - Diesel Range Organics C_{10}-C_{28}
[3]BTEX - The sum of Benzene, Toluene, Ethyl Benzene, and m,p, &o Xylene
[4]NA - not analyzed
[5]**Bolded values** are in excess of the New Mexico Oil Conservation Division Guideline Threshold for the parameter
[6]*Italicized values are < the instrument detection limit.*
[7]GRO+DRO (TPH) - Total Petroleum Hydrocarbon EPA Method 8015M

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENRON TRANSPORTATION SERVICES
ATTN: MR. WAYNE BRUNETTE
5805 EAST HWY. 80
MIDLAND, TEXAS 79701
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ -2.5 deg. C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: Pistole Ranch

Sampling Date: 04/25/01
Receiving Date: 04/27/01
Analysis Date: 05/02/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
39837	S42501KSSPOILS	1.32	105	62.2	298	133
%IA		89	95	100	109	99
%EA		93	95	98	111	102
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

5-4-01
Date

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MIDLAND, TEXAS 79701
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/Iced/ -2.5 deg C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: Pistole Ranch

Sampling Date: 04/25/01
Receiving Date: 04/27/01
Analysis Date: 04/30/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
39837	S42501KSSPOILS	24994	76655
	% IA	85	113
	%EA	93	106
	BLANK	<10	<10

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

5-2-01
Date

ENVIRONMENTAL LAB OF , INC.

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ATTN: MR. WAYNE BRUNETTE
5805 EAST HWY. 80
MIDLAND, TEXAS 79701
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/Iced/ -2.5 deg C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: Pistole Ranch

Sampling Date: 04/25/01
Receiving Date: 04/27/01
Analysis Date: 05/02/01

ELT#	FIELD CODE	Chloride mg/kg
39837	S42501KSSPOILS	397
	QUALITY CONTROL	5069
	TRUE VALUE	5000
	% INSTRUMENT ACCURACY	101
	BLANK	<10

Methods: EPA SW 846-9253

Raland K. Tuttle

5-2-01
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: WAYNE BRUNETTE
Company Name: ENRON TRANSPORTATION SERVICES
Company Address: 5805 East Highway 80
City/State/Zip: Midland, TX 79701
Telephone No: 915.556.0190 or 684.3479 Fax No: 915.684.3456
Sampler Signature:

Project Name: Kimbrough Sweet
Project #: 2000-10757
Project Loc: Pistole Ranch
PO #:

Spoils Pile

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TCLP/TOTAL: TDS (CL) SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RUSH TAT (Pre-Schedule)	Standard TAT
39931	S42501KSSPOILS	4.25.01	0900	1	✓									✓		✓			✓				✓		✓

Special Instructions: CoC requested
FAX TO W. Brunette & Pat McCasland EPI 505.394.2601

Relinquished by:	Date	Time	Received by:	Date	Time
	4-27-01	11:45	Sandra Biegler	4-27-01	11:45
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				4-27-01	15:30

Sample Containers Intact? (Y) N
Temperature Upon Receipt: ~2 °C
Laboratory Comments:

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/Iced/ 1 deg C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T 18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/09/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
38014	KSS3501BH1-2	2219	3654	03/05/01
38015	KSS3501BH1-5	8253	11600	03/05/01
38016	KSS3501BH1-10	6655	11575	03/05/01
38017	KSS3501BH1-15	3457	6323	03/05/01
38018	KSS3501BH1-20	1736	6314	03/05/01
38019	KSS3501BH1-25	2278	4512	03/05/01
38020	KSS3501BH1-30	4210	8135	03/05/01
38021	KSS3501BH1-35	2870	5324	03/05/01
38022	KSS3501BH1-40	3389	6993	03/05/01
38023	KSS3501BH1-45	3140	5980	03/05/01
38024	KSS3701BH4-2	168	810	03/07/01
38025	KSS3701BH4-5	18	435	03/07/01
38026	KSS3701BH4-10	<10	<10	03/07/01
38027	KSS3701BH4-15	<10	<10	03/07/01
38028	KSS3701BH4-20	<10	103	03/07/01
38029	KSS3701BH3-2	9484	60246	03/07/01
38030	KSS3701BH3-5	7532	14845	03/07/01
38031	KSS3701BH3-10	6359	11377	03/07/01
38032	KSS3701BH3-15	9322	18515	03/07/01
38033	KSS3701BH3-20	4399	12818	03/07/01
	% IA	98	112	
	%EA	102	115	
	BLANK	<10	<10	

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

3-12-01
Date

ENVIRONMENTAL LAB OF , INC.

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ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/Iced/ 1 deg C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T 18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/10/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
38034	KSS3701BH3-25	3321	6830	03/07/01
38035	KSS3701BH3-30	3257	6198	03/07/01
38036	KSS3701BH3-35	789	2148	03/07/01
38037	KSS3701BH3-40	3118	6616	03/07/01
38038	KSS3701BH3-45	2872	5992	03/07/01
38039	KSS3601BH8-2	595	29002	03/06/01
38040	KSS3601BH8-5	<10	<10	03/06/01
38041	KSS3601BH8-10	<10	<10	03/06/01
38042	KSS3601BH8-15	<10	<10	03/06/01
38043	KSS3601BH9-2	7257	37734	03/06/01
38044	KSS3601BH9-5	2555	6208	03/06/01
38045	KSS3601BH9-10	37	319	03/06/01
38046	KSS3601BH9-15	<10	115	03/06/01
38047	KSS3601BH9-20	<10	43	03/06/01
38048	KSS3501BH6-2	3711	10471	03/05/01
38049	KSS3501BH6-5	6292	15437	03/05/01
38050	KSS3501BH6-10	708	2647	03/05/01
38051	KSS3501BH6-15	28	377	03/05/01
38052	KSS3501BH6-20	22	246	03/05/01
38053	KSS3601BH7-2	29	279	03/06/01
	% IA	88	113	
	%EA	85	118	
	BLANK	<10	<10	

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

3-12-01
Date

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ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/Iced/ 1 deg C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T 18S R37E

Sampling Date: 03/06/01
Receiving Date: 03/09/01
Analysis Date: 03/11/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
38054	KSS3601BH7-5	1454	3780
38055	KSS3601BH7-10	722	2640
38056	KSS3601BH7-15	139	616
38057	KSS3601BH7-20	112	713
	% IA	88	110
	%EA	99	110
	BLANK	<10	<10

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

3-12-01
Date

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EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat Mc Casland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/09/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
38014	KSS3501BH1-2	<0.500	99.4	34.7	131	38.2	03/05/01
38015	KSS3501BH1-5	219	714	290	481	163	03/05/01
38016	KSS3501BH1-10	57.2	221	94.2	210	54.6	03/05/01
38017	KSS3501BH1-15	30.4	152	77.2	159	52.5	03/05/01
38018	KSS3501BH1-20	1.02	23.6	25.3	53.2	17.5	03/05/01
38019	KSS3501BH1-25	8.04	83.4	46.6	96.2	33.3	03/05/01
38020	KSS3501BH1-30	13.5	127	63.3	131	39.4	03/05/01
38021	KSS3501BH1-35	7.42	105	51.4	117	38.3	03/05/01
38022	KSS3501BH1-40	8.18	72.7	40.3	89.9	31.5	03/05/01
38023	KSS3501BH1-45	11.7	100	49.3	114	37.9	03/05/01
38024	KSS3701BH4-2	<0.100	2.07	0.593	2.92	2.56	03/07/01
38025	KSS3701BH4-5	<0.025	0.043	0.028	0.048	<0.025	03/07/01
	%IA	105	110	113	111	112	
	%EA	99	101	104	102	108	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

3-12-01
Date

ENVIRONMENTAL LAB OF , INC.

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P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat Mc Casland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/10/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
38026	KSS3701BH4-10	<0.025	<0.025	<0.025	<0.025	<0.025	03/07/01
38027	KSS3701BH4-15	<0.025	0.034	<0.025	<0.025	<0.025	03/07/01
38028	KSS3701BH4-20	<0.025	<0.025	<0.025	<0.025	<0.025	03/07/01
38029	KSS3701BH3-2	8.84	72.8	58.0	120	48.0	03/07/01
38030	KSS3701BH3-5	64.0	347	205	372	127	03/07/01
38031	KSS3701BH3-10	50.9	257	128	251	86.9	03/07/01
38032	KSS3701BH3-15	37.2	243	135	273	94.4	03/07/01
38033	KSS3701BH3-20	5.03	74.8	51.4	117	33.4	03/07/01
38054	KSS3601BH7-5	<0.250	18.5	25.6	51.1	16.6	03/06/01
38055	KSS3601BH7-10	<0.250	7.54	6.14	13.2	4.62	03/06/01
38056	KSS3601BH7-15	<0.100	1.43	1.55	3.57	1.52	03/06/01
38057	KSS3601BH7-20	0.042	0.917	1.51	3.03	1.27	03/06/01
	%IA	105	110	113	113	113	
	%EA	96	100	103	102	104	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

3-12-01
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Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/09/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
38034	KSS3701BH3-25	7.16	94.3	41.7	93.4	41.6	03/07/01
38035	KSS3701BH3-30	10.4	127	51.2	118	52.6	03/07/01
38036	KSS3701BH3-35	0.165	10.2	9.13	24.6	11.2	03/07/01
38037	KSS3701BH3-40	7.40	114	46.3	117	50.5	03/07/01
38038	KSS3701BH3-45	4.87	83.9	35.3	90.5	37.0	03/07/01
38039	KSS3601BH8-2	0.067	0.097	<0.025	0.042	<0.025	03/06/01
38040	KSS3601BH8-5	<0.025	<0.025	<0.025	<0.025	<0.025	03/06/01
38041	KSS3601BH8-10	<0.025	<0.025	<0.025	<0.025	<0.025	03/06/01
38042	KSS3601BH8-15	<0.025	<0.025	<0.025	<0.025	<0.025	03/06/01
38043	KSS3601BH9-2	0.675	26.3	29.3	76.5	40.8	03/06/01
	%IA	99	101	103	110	103	
	%EA	100	102	106	115	108	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

3-12-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat Mc Casland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: 2000-10757
Project Name: Kimbrough Sweet
Project Location: N/2 Sec 3 T18S R37E

Sampling Date: See Below
Receiving Date: 03/09/01
Analysis Date: 03/10/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
38044	KSS3601BH9-5	4.89	167	107	266	98.6	03/06/01
38045	KSS3601BH9-10	<0.025	<0.025	0.106	0.316	0.137	03/06/01
38046	KSS3601BH9-15	<0.025	<0.025	<0.025	0.026	<0.025	03/06/01
38047	KSS3601BH9-20	<0.025	<0.025	<0.025	<0.025	<0.025	03/06/01
38048	KSS3501BH6-2	1.82	61.4	56.7	144	62.5	03/05/01
38049	KSS3501BH6-5	7.36	207	120	287	107	03/05/01
38050	KSS3501BH6-10	<0.250	3.30	5.92	12.2	7.00	03/05/01
38051	KSS3501BH6-15	<0.025	0.028	<0.025	0.088	0.041	03/05/01
38052	KSS3501BH6-20	<0.025	<0.025	<0.025	0.035	<0.025	03/05/01
38053	KSS3601BH7-2	<0.025	<0.025	0.097	0.255	0.351	03/06/01
	%IA	94	97	100	107	102	
	%EA	98	102	109	113	109	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

3-12-01
Date

Environmental Lab of Texas, Inc.

[redacted] 12600 West I-20 [redacted] Odessa, Texas [redacted] 63
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette EOTT

Phone #: 915 556-0190

FAX #: 915-684-3456

Company Name & Address: E.O.T.T.

Project #: 2000-10757

Project Name: Kimbrough Sweet

Project Location: N/2 Sec 3 T18S R37E

Sampler Signature: Bradley Blevins

ANALYSIS REQUEST

1 of 5

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B (5030)	TPH [redacted] BOSEN	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	NCI
38014	KSS3501BH1-2 -	1			X						X			3-5-01	8:05	X	X						
38015	KSS3501BH1-5 -	1			X						X			3-5-01	8:20	X	X						
38016	KSS3501BH1-10 -	1			X						X			3-5-01	8:35	X	X						
38017	KSS3501BH1-15 -	1			X						X			3-5-01	8:48	X	X						
38018	KSS3501BH1-20 -	1			X						X			3-5-01	9:33	X	X						
38019	KSS3501BH1-25 -	1			X						X			3-5-01	9:45	X	X						
38020	KSS3501BH1-30 -	1			X						X			3-5-01	10:00	X	X						
38021	KSS3501BH1-35 -	1			X						X			3-5-01	10:10	X	X						
38022	KSS3501BH1-40 -	1			X						X			3-5-01	10:20	X	X						
38023	KSS3501BH1-45 -	1			X						X			3-5-01	10:30	X	X						
[redacted]																							

Relinquished by:	Date:	Time:	Received by:
Bradley Blevins	3-8-01	1600	
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:
	3-9-01	0815A	

REMARKS

Original to W. Brunette & P. McCasland EPI.

FAX + or E-mail to W. Brunette + P. McCasland 394-2601

10C

Environmental Lab of Texas, Inc. [redacted] 20 [redacted] Od[redacted] Texas [redacted]63
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette EOTT

Phone #: 915 · 556 · 0190

FAX #: 915 · 684 · 3456

Company Name & Address: E.O.T.T.

Project #: 2000-10759

Project Name: Kinbrough Sweet

Project Location: N/2 Sec 3 T18S R37E

Sampler Signature: Bradley Blevins

ANALYSIS REQUEST

Pg 2 of 3

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	TX1005(0)(1)	TPH 418.1 Solvent	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
38257	KSS31401 BH525	1			X						X			3-14-01	11:50	X	X						
38258	KSS31401 BH530	1			X						X			3-14-01	9:05	X	X						
38259	KSS31401 BH535	1			X						X			3-14-01	2:25	X	X						
38260	KSS31401 BH540	1			X						X			3-14-01	2:42	X	X						
38261	KSS31401 BH545	1			X						X			3-14-01	3:05	X	X						

Relinquished by:	Date:	Time:	Received by:
Bradley Blevins	3-16-01	6:00	Cody Miller
Relinquished by:	Date:	Time:	Received by:
Cody Miller	03-16-01	1025	Jeanne McNeely
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS

Original: to W. Brunette & P. McCasland EPI.

FAX + or E-mail to W. Brunette + P. McCasland 394-2601

Rec 2.0°C

Environmental Lab of Texas, Inc. 12600 W[illegible] 915/563-18[illegible] FA[illegible]5) 5[illegible]13

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Pg 3 of 3

Project Manager: Wayne Brunette EOTT

Phone #: 915 556-0190

FAX #: 915-614-3456

Company Name & Address: EOTT

Project #: 2000-10757

Project Name: Kimbrough Sweet

Project Location: N/2 Sec 3 T18S R37E

Sampler Signature: Bradley Blevins

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH 8015m	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
38262	KSS31401BH2-2	1			X						X			3-14-01	7:20	X	X						
38263	KSS31401BH2-5	1			X						X			3-14-01	7:35	X	X						
38264	KSS31401BH2-10	1			X						X			3-14-01	8:05	X	X						
38265	KSS31401BH2-15	1			X						X			3-14-01	9:05	X	X						
38266	KSS31401BH2-20	1			X						X			3-14-01	9:35	X	X						
38267	KSS31401BH2-25	1			X						X			3-14-01	10:35	X	X						
38268	KSS31401BH2-30	1			X						X			3-14-01	11:00	X	X						
38269	KSS31401BH2-35	1			X						X			3-14-01	11:35	X	X						
38270	KSS31401BH2-40	1			X						X			3-14-01	12:35	X	X						
38271	KSS31401BH2-45	1			X						X			3-14-01	1:35	X	X						

Relinquished by:	Date:	Time:	Received by:
Bradley Blevins	3-16-01	6:00	Cody Miller
Cody Miller	03-16-01	1025	Joanne McMurry
			Received by Laboratory

REMARKS

Original to W. Brunette & P. McCasland EPI.

FAX + or E-mail to W. Brunette + P. McCasland 394-2601

Rec 2.0 °C

ANALYSYS INC.

4221 Freidrich [redacted], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115724 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501WBHC
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:10

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	9970	mg/Kg	200	<200	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	1550	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	25.8	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	3340	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	8570	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	4310	µg/Kg	20	<20	07/16/01	8260b
Toluene	2410	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

This preliminary analytical report is respectfully submitted by AnalySys, Inc. The enclosed data may not have received final review for full compliance with AnalySys, Inc.'s QA/QC program or for completeness. Although the reported results contained herein are believed to be correct, based upon initial data review, final QA/QC review may result in results different from those reported herein.

Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich [redacted], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115725 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501US
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:00

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL[1]	Blank	Date	Method
TPH by GC (as diesel)	25900	mg/Kg	400	<400	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	12400	mg/Kg	1250	<1250	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	25500	µg/Kg	5000	<5000	07/16/01	8260b
Ethylbenzene	109000	µg/Kg	5000	<5000	07/16/01	8260b
m,p-Xylenes	207000	µg/Kg	5000	<5000	07/16/01	8260b
o-Xylene	82500	µg/Kg	5000	<5000	07/16/01	8260b
Toluene	202000	µg/Kg	5000	<5000	07/16/01	8260b

1. Reporting Quantitation Limit (RQL); typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

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Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich [redacted], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115726 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS750101MBHC
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:20

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL[1]	Blank	Date	Method
TPH by GC (as diesel)	5530	mg/Kg	200	<200	07/23/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	790	mg/Kg	100	<100	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/14/01	8260b
Benzene	95.3	µg/Kg	20	<20	07/14/01	8260b
Ethylbenzene	1520	µg/Kg	20	<20	07/14/01	8260b
m,p-Xylenes	2690	µg/Kg	20	<20	07/14/01	8260b
o-Xylene	1300	µg/Kg	20	<20	07/14/01	8260b
Toluene	1230	µg/Kg	20	<20	07/14/01	8260b

1. Reporting Quantitation Limit (RQL); typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich La[illegible] Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client:	EOTT Energy Corp.
Attn:	Frank Hernandez
Address:	5805 East Hwy 80
	Midland Tx 79701
Phone:	915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#:	115727 **Report Date:** 07/24/01
Project ID:	Kimbrough Sweet / 2000-10757
Sample Name:	KS7501EBHC
Sample Matrix:	soil
Date Received:	07/06/2001 **Time:** 16:34
Date Sampled:	07/05/2001 **Time:** 14:30

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL[1]	Blank	Date	Method
TPH by GC (as diesel)	107	mg/Kg	10	<10	07/23/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/14/01	8260b
Benzene	<20	µg/Kg	20	<20	07/14/01	8260b
Ethylbenzene	<20	µg/Kg	20	<20	07/14/01	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	07/14/01	8260b
o-Xylene	<20	µg/Kg	20	<20	07/14/01	8260b
Toluene	<20	µg/Kg	20	<20	07/14/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

This preliminary analytical report is respectfully submitted by AnalySys, Inc. The enclosed data may not have received final review for full compliance with AnalySys, Inc.'s QA/QC program or for completeness. Although the reported results contained herein are believed to be correct, based upon initial data review, final QA/QC review may result in results different from those reported herein.

Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich La Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 FAX: 915 684-3456

Report#/Lab ID#: 115728 Report Date: 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501TSS
Sample Matrix: soil
Date Received: 07/06/2001 Time: 16:34
Date Sampled: 07/05/2001 Time: 14:40

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	7590	mg/Kg	100	<100	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	3620	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	26.9	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	1260	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	11200	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	7110	µg/Kg	20	<20	07/16/01	8260b
Toluene	285	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

Respectfully Submitted,

Richard Laster

Richard Laster

AnalySys Inc.

4221 Freidrich La[illegible] Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701
Phone: 915 638-3799 FAX: 915 684-3456

Report#/Lab ID#: 115729 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501TSN
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:50

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	4530	mg/Kg	100	<100	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	2740	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	<20	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	22	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	512	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	2890	µg/Kg	20	<20	07/16/01	8260b
Toluene	21.9	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL); typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

This preliminary analytical report is respectfully submitted by AnalySys, Inc. The enclosed data may not have received final review for full compliance with AnalySys, Inc.'s QA/QC program or for completeness. Although the reported results contained herein are believed to be correct, based upon initial data review, final QA/QC review may result in results different from those reported herein.

Respectfully Submitted,

Richard Laster

Richard Laster

CHAIN-OF-CUSTODY

4221 Freidrich Lane, Suite 190, Austin, TX 78744
(512) 444-5896

Send Reports To:
Company Name EOTT
Address 5805 East Highway 8
City Midland State TX Zip 79701
ATTN: Frank Hernandez
Phone 915-638-3799 Fax 915.684.3451

Bill to (if different):
Company Name Same
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: 2000-10257 Sampler: Bradley Blevins
Kimbrough Sweet

Analyses Requested (1)
Please attach explanatory information as required

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	TPH 8015M	BTEX 8021B	Comments
KS7501WBHC	7-5-01	2:10	1	X				X	X	
KS7501US	7-5-01	2:00	1	X				X	X	
KS7501MBHC	7-5-01	2:20	1	X				X	X	
KS7501EBHC	7-5-01	2:30	1	X				X	X	
KS7501TSS	7-5-01	2:40	1	X				X	X	
KS7501TSN	7-5-01	2:50	1	X				X	X	

Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporti nits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutant SI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

FAX To Pat McCasland @ 505.394.2601 FAX To Frank Hernandez (Send Originals to both)

Sample Relinquished By				Sample Received By			
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time
Bradley Blevins	EPI	7-5-01	1600		EPI	7-5-01	1600
	EPI Fedex	7-5-01	1720				

Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]

Environmental Lab of Texas, Inc.

12600 W. I-20 E. Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Pg 2 of 3

Project Manager: Wayne Brunette EOTT

Phone #: 915 556-0190

FAX #: 915-674-3456

Company Name & Address: E.O.T.T.

Project #: 2000-10757

Project Name: Kinbrough Sweet

Project Location: N/2 Sec 3 T18S R37E

Sampler Signature: Bradley Blevins

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	H2SO4	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B/5030	TPH 418.1 / 8015	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
38257	KSS31401 BH525	1			X						X			3-14-01	11:50	X	X						
38258	KSS31401 BH530	1			X						X			3-14-01	12:05	X	X						
38259	KSS31401 BH535	1			X						X			3-14-01	2:25	X	X						
38260	KSS31401 BH540	1			X						X			3-14-01	2:42	X	X						
38261	KSS31401 BH545	1			X						X			3-14-01	3:05	X	X						

Relinquished by:	Date:	Time:	Received by:
Bradley Blevins	3-16-01	6:00	Cody Miller
Cody Miller	03-16-01	1025	Deanne McMurry
			Received by Laboratory:

REMARKS

Original: to W. Brunette & P. McCasland EPI.

FAX + or E-mail to W. Brunette + P. McCasland 394-2601

Rec 2.0°C

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas [redacted]
(915) 563-1800 FAX (915) 563-1713

ANALYSIS REQUEST

Pg 3 of 3

Project Manager: Wayne Brunette EOTT

Phone #: 915 536-0170

FAX #: 915-614-3456

Company Name & Address: EOTT

Project #: 2000-10757

Project Name: Kimbrough Sweet

Project Location: N/2 Sec 3 T18S R37E

Sampler Signature: Bradley Blevins

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	(TEX 1102) 5(1)(1)	TPH 8015m	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	HCl
38262	KSS31401BH2-2	1			X						X			3-14-01	7:20	X	X						
38263	KSS31401BH2-5	1			X						X			3-14-01	7:35	X	X						
38264	KSS31401BH2-10	1			X						X			3-14-01	8:05	X	X						
38265	KSS31401BH2-15	1			X						X			3-14-01	9:05	X	X						
38266	KSS31401BH2-20	1			X						X			3-14-01	9:35	X	X						
38267	KSS31401BH2-25	1			X						X			3-14-01	10:35	X	X						
38268	KSS31401BH2-30	1			X						X			3-14-01	11:00	X	X						
38269	KSS31401BH2-35	1			X						X			3-14-01	11:35	X	X						
38270	KSS31401BH2-40	1			X						X			3-14-01	12:35	X	X						
38271	KSS31401BH2-45	1			X						X			3-14-01	1:35	X	X						

Relinquished by:	Date:	Time:	Received by:
Bradley Blevins	3-16-01	6:00	Cody Miller
Relinquished by:	Date:	Time:	Received by:
Cody Miller	03-16-01	1025	Jeanne McMurry
Relinquished by:	Date:	Time:	Received by (Laboratory)

REMARKS

Original: to W. Brunette & P. McCasland EPI.

FAX + or E-mail to W. Brunette + P. McCasland 394-2601

Rec 2.0 °C

ANALYSYS INC.

4221 Freidrich [illegible], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client:	EOTT Energy Corp.
Attn:	Frank Hernandez
Address:	5805 East Hwy 80
	Midland Tx 79701
Phone:	915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#:	115724 **Report Date:** 07/24/01
Project ID:	Kimbrough Sweet / 2000-10757
Sample Name:	KS7501WBHC
Sample Matrix:	soil
Date Received:	07/06/2001 **Time:** 16:34
Date Sampled:	07/05/2001 **Time:** 14:10

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL[1]	Blank	Date	Method
TPH by GC (as diesel)	9970	mg/Kg	200	<200	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	1550	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	25.8	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	3340	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	8570	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	4310	µg/Kg	20	<20	07/16/01	8260b
Toluene	2410	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

This preliminary analytical report is respectfully submitted by AnalySys, Inc. The enclosed data may not have received final review for full compliance with AnalySys, Inc.'s QA/QC program or for completeness. Although the reported results contained herein are believed to be correct, based upon initial data review, final QA/QC review may result in results different from those reported herein.

Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich [illegible], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115725 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501US
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:00

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	25900	mg/Kg	400	<400	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	12400	mg/Kg	1250	<1250	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	25500	µg/Kg	5000	<5000	07/16/01	8260b
Ethylbenzene	109000	µg/Kg	5000	<5000	07/16/01	8260b
m,p-Xylenes	207000	µg/Kg	5000	<5000	07/16/01	8260b
o-Xylene	82500	µg/Kg	5000	<5000	07/16/01	8260b
Toluene	202000	µg/Kg	5000	<5000	07/16/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

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Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.
4221 Freidrich [illegible], Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115726 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS750101MBHC
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:20

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	5530	mg/Kg	200	<200	07/23/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	790	mg/Kg	100	<100	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/14/01	8260b
Benzene	95.3	µg/Kg	20	<20	07/14/01	8260b
Ethylbenzene	1520	µg/Kg	20	<20	07/14/01	8260b
m,p-Xylenes	2690	µg/Kg	20	<20	07/14/01	8260b
o-Xylene	1300	µg/Kg	20	<20	07/14/01	8260b
Toluene	1230	µg/Kg	20	<20	07/14/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich La Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701
Phone: 915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115727 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501EBHC
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:30

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL[1]	Blank	Date	Method
TPH by GC (as diesel)	107	mg/Kg	10	<10	07/23/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	<5	mg/Kg	5	<5	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/14/01	8260b
Benzene	<20	µg/Kg	20	<20	07/14/01	8260b
Ethylbenzene	<20	µg/Kg	20	<20	07/14/01	8260b
m,p-Xylenes	<20	µg/Kg	20	<20	07/14/01	8260b
o-Xylene	<20	µg/Kg	20	<20	07/14/01	8260b
Toluene	<20	µg/Kg	20	<20	07/14/01	8260b

1. Reporting Quantitation Limit (RQL): typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

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Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.

4221 Freidrich La Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client: EOTT Energy Corp.
Attn: Frank Hernandez
Address: 5805 East Hwy 80
Midland Tx 79701

Phone: 915 638-3799 FAX: 915 684-3456

Report#/Lab ID#: 115728 **Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757
Sample Name: KS7501TSS
Sample Matrix: soil
Date Received: 07/06/2001 **Time:** 16:34
Date Sampled: 07/05/2001 **Time:** 14:40

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	7590	mg/Kg	100	<100	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	3620	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	26.9	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	1260	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	11200	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	7110	µg/Kg	20	<20	07/16/01	8260b
Toluene	285	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL); typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

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Respectfully Submitted,

Richard Laster

Richard Laster

ANALYSYS INC.
4221 Freidrich La[illegible] Suite 190, Austin, TX 78744 &
2209 N. Padre Island Dr., Corpus Christi, TX 78408
(512) 444-5896 • FAX (512) 447-4766

Client:	EOTT Energy Corp.
Attn:	Frank Hernandez
Address:	5805 East Hwy 80
	Midland Tx 79701
Phone:	915 638-3799 **FAX:** 915 684-3456

Report#/Lab ID#: 115729	**Report Date:** 07/24/01
Project ID: Kimbrough Sweet / 2000-10757	
Sample Name: KS7501TSN	
Sample Matrix: soil	
Date Received: 07/06/2001	**Time:** 16:34
Date Sampled: 07/05/2001	**Time:** 14:50

PRELIMINARY REPORT OF ANALYSIS

Parameter	Result	Units	RQL [1]	Blank	Date	Method
TPH by GC (as diesel)	4530	mg/Kg	100	<100	07/24/01	8015 mod
TPH by GC (as diesel-ext)	---	---	---	---	07/18/01	3540
TPH by GC (as gasoline)	2740	mg/Kg	500	<500	07/16/01	8015 mod.
Volatile organics-8260b/BTEX	---		---		07/16/01	8260b
Benzene	<20	µg/Kg	20	<20	07/16/01	8260b
Ethylbenzene	22	µg/Kg	20	<20	07/16/01	8260b
m,p-Xylenes	512	µg/Kg	20	<20	07/16/01	8260b
o-Xylene	2890	µg/Kg	20	<20	07/16/01	8260b
Toluene	21.9	µg/Kg	20	<20	07/16/01	8260b

1. Reporting Quantitation Limit (RQL); typically at or above the Practical Quantitation Limit (PQL) of the analytical method.

This preliminary analytical report is respectfully submitted by AnalySys, Inc. The enclosed data may not have received final review for full compliance with AnalySys, Inc.'s QA/QC program or for completeness. Although the reported results contained herein are believed to be correct, based upon initial data review, final QA/QC review may result in results different from those reported herein.

Respectfully Submitted,

Richard Laster

Richard Laster

HAIN-OF-CUSTODY

AnalySys Inc.
4221 Freidrich Lane, Suite 190, Austin, TX 7874
(512) 444-5896

Send Reports To:
Company Name EOTT
Address 5805 East Highway 8
City Midland State TX Zip 79701
ATTN: Frank Hernandez
Phone 915-638-3799 Fax 915-684-3451

Bill to (if different):
Company Name Same
Address
City State Zip
ATTN:
Phone Fax

Rush Status (must be confirmed with lab mgr.):
Project Name/PO#: 2000-10257 Sampler: Bradley Blevins
Kimbrough Sweet

Analyses Requested (1)
Please attach explanatory information as require

Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers	Soil	Water	Waste	Lab I.D. # (Lab only)	TPH 8015 M	BTEX 8021b							Comments
KS7501WBHC	7-5-01	2:10	1	X				X	X							
KS7501US	7-5-01	2:00	1	X				X	X							
KS7501MBHC	7-5-01	2:20	1	X				X	X							
KS7501EBHC	7-5-01	2:30	1	X				X	X							
KS2501TSS	7-5-01	2:40	1	X				X	X							
KS7501TSN	7-5-01	2:50	1	X				X	X							

Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporti
its (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants
SI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

FAX To Pat McCasland [redacted] @ 505-394-2601 FAX To Frank Hernadez (Send Originals to both)

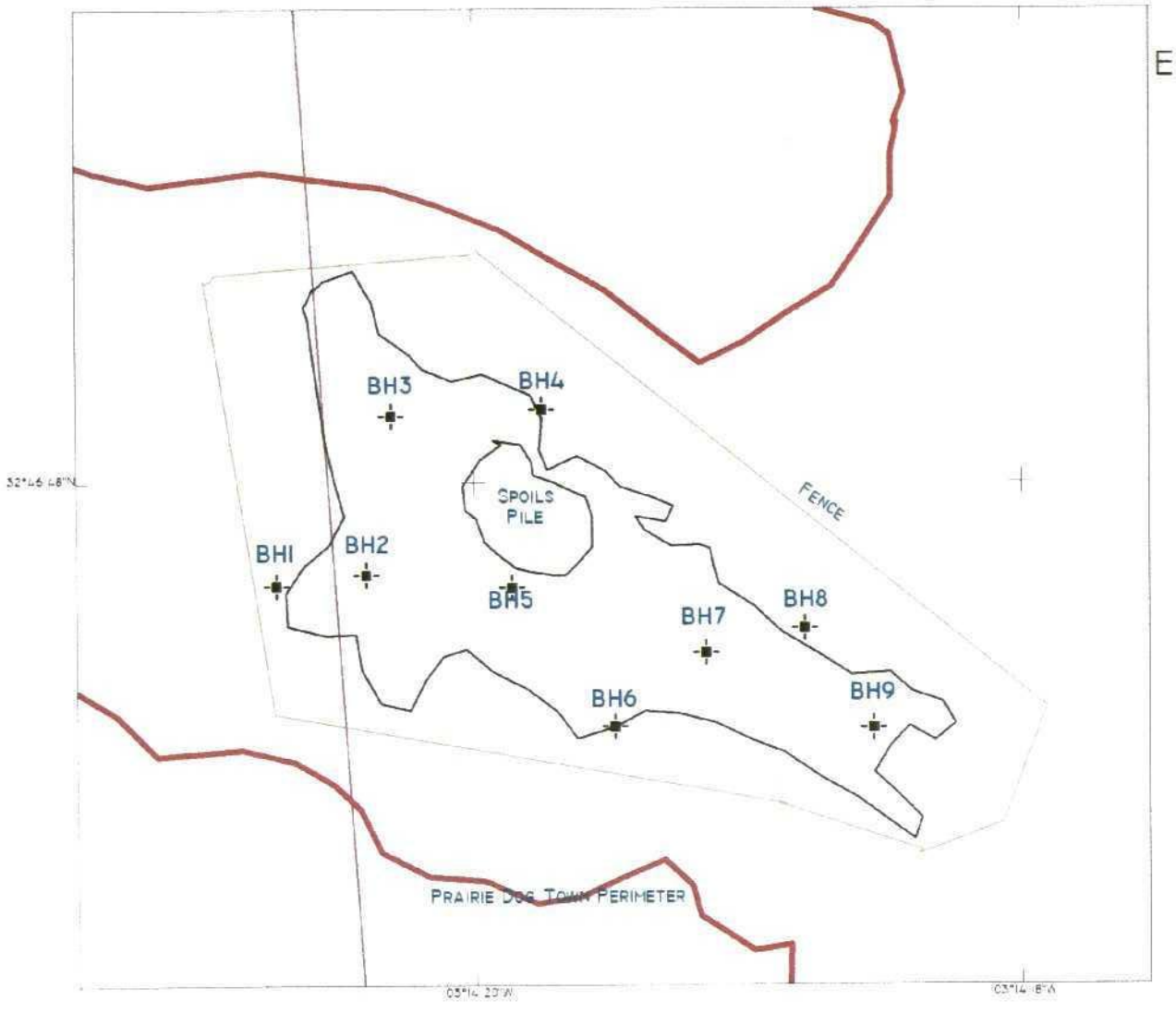
Sample Relinquished By

Name	Affiliation	Date	Time
Bradley Blevins	EPI	7-5-01	1600
Pat McCasland	EPI Fedex	7-5-01	1720

Sample Received By

Name	Affiliation	Date	Time
Pat McCasland	EPI	7-5-01	1600

Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]



E.O.T.T. Energy Pipeline Kimbrough Sweet UL-G Sec 3 T18S R37E Sample Borehole Locations

N

SCALE 1 IN : 50 FT

0 60.00

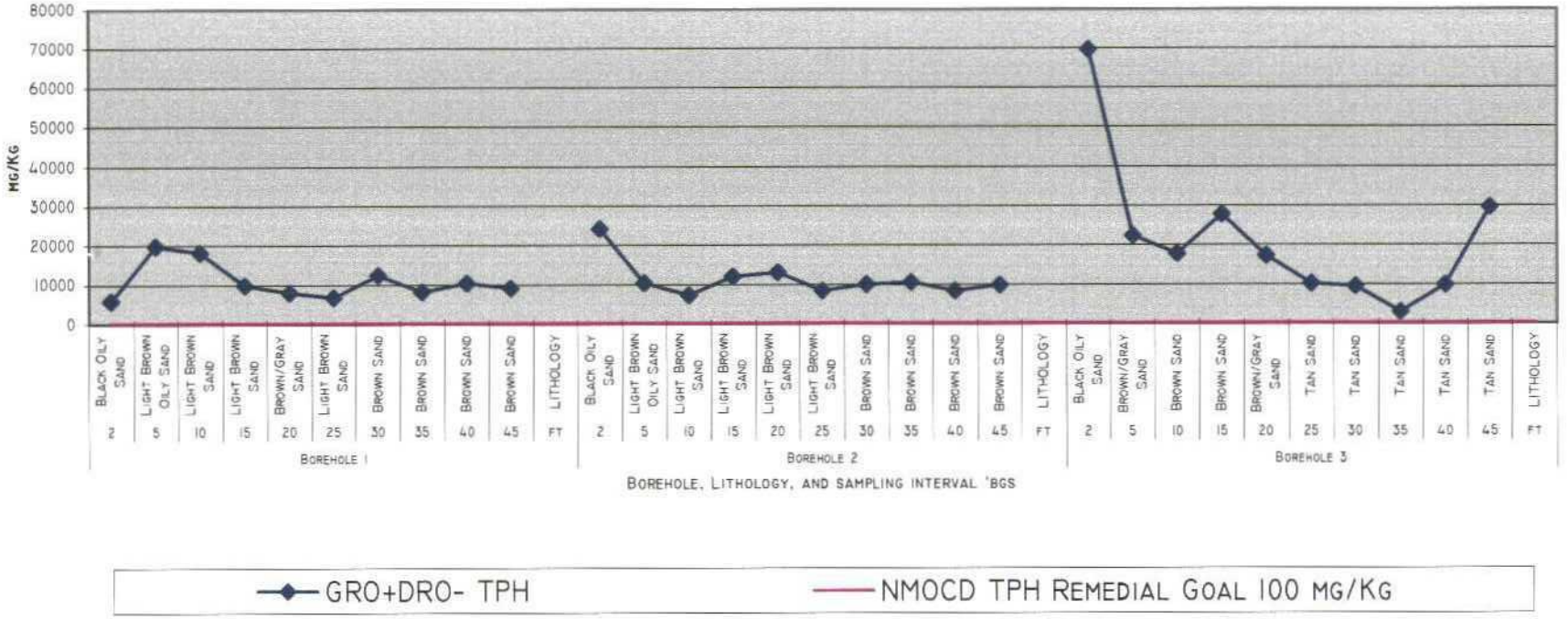
FEET

LAT/LONG
WGS 1984

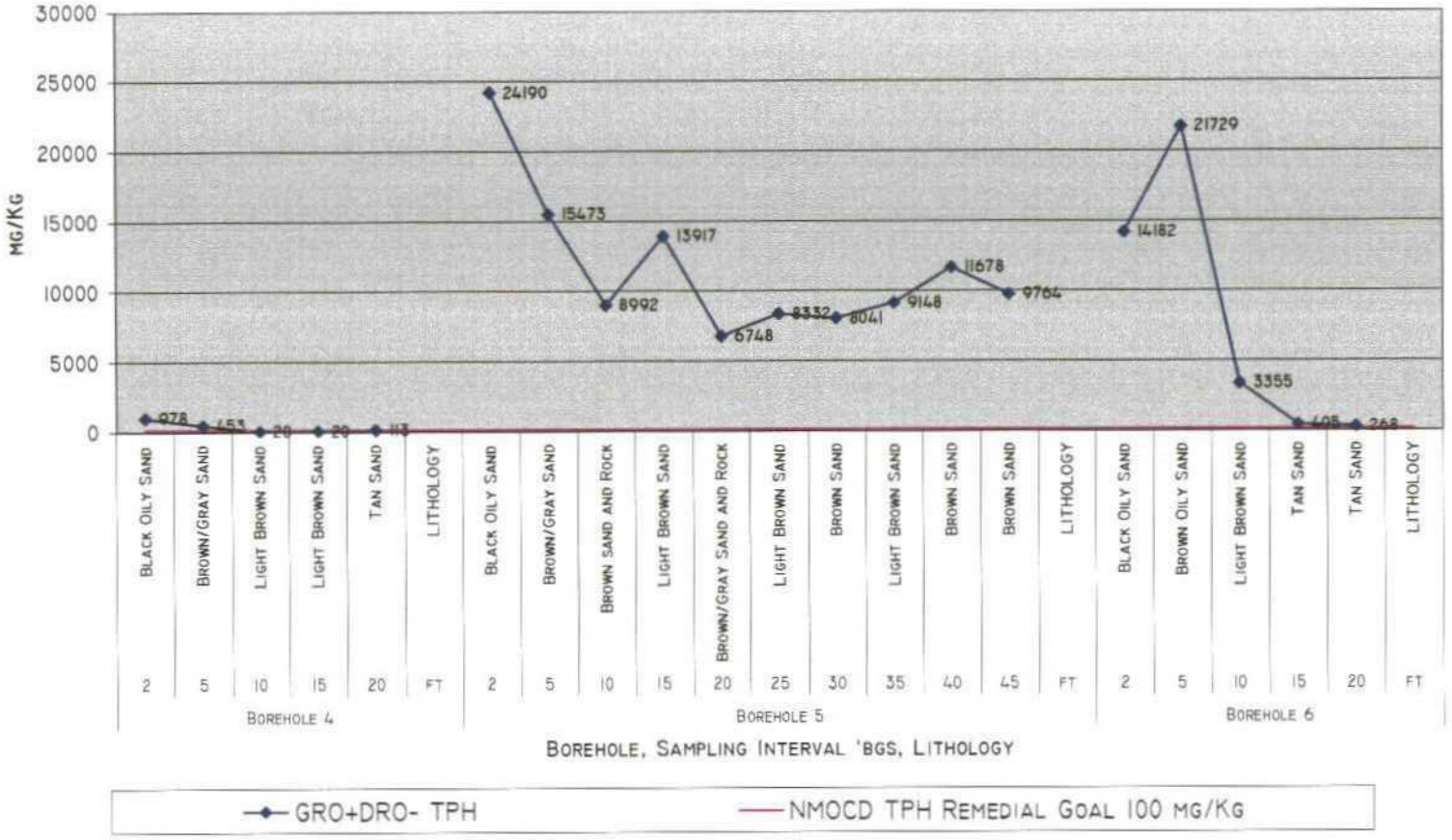
KIMBROUGHB.COR

7/31/2001

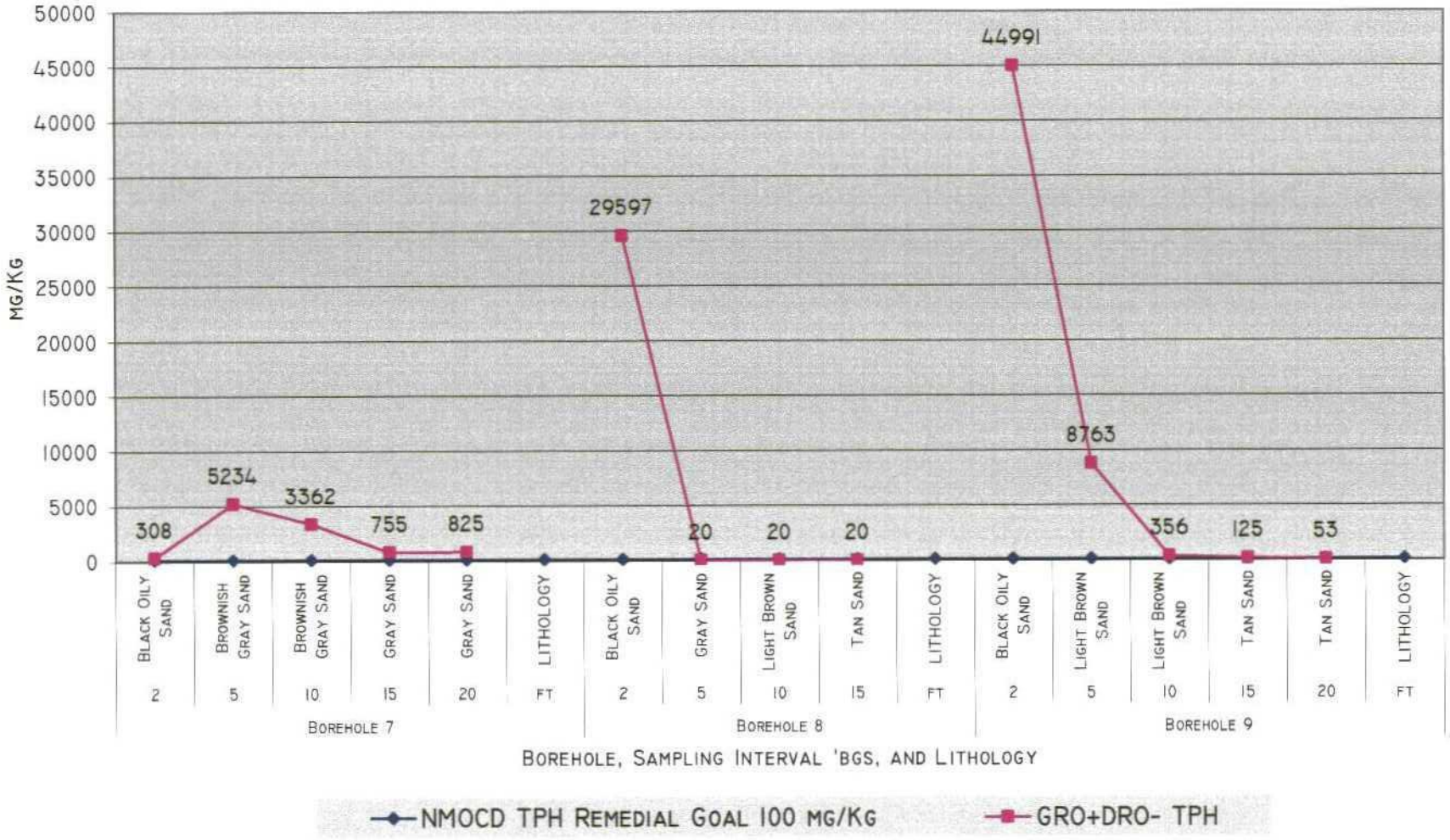
E.O.T.T. ENERGY PIPELINE
KIMBROUGH SWEET
TOTAL PETROLEUM HYDROCARBON (8015M)
SUBSURFACE DELINEATION BOREHOLES 1, 2, & 3



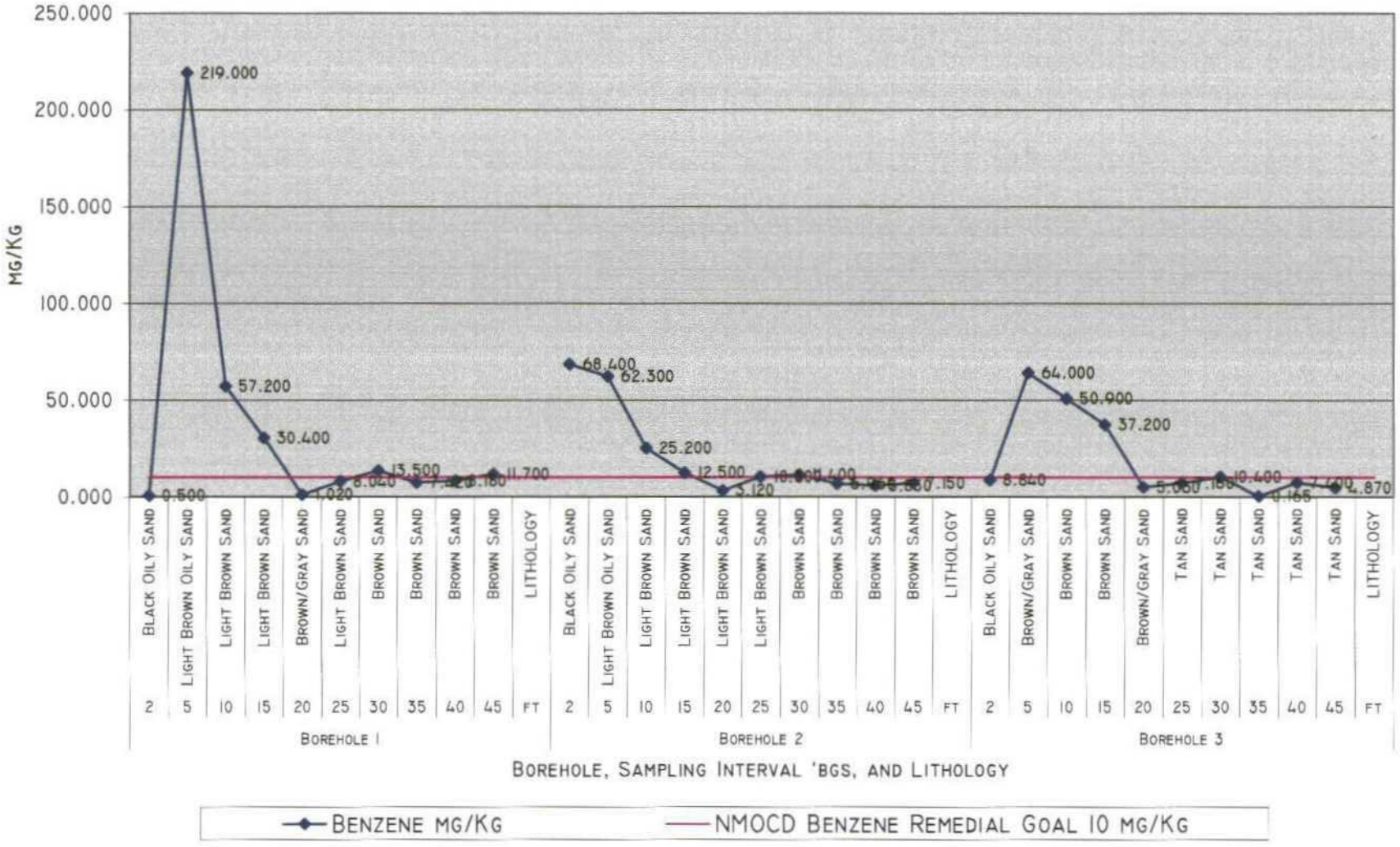
E.O.T.T. Energy Pipeline
Kimbrough Sweet
Delineation of Total Petroleum Hydrocarbon (8015M) in Boreholes #4, 5, & 6.



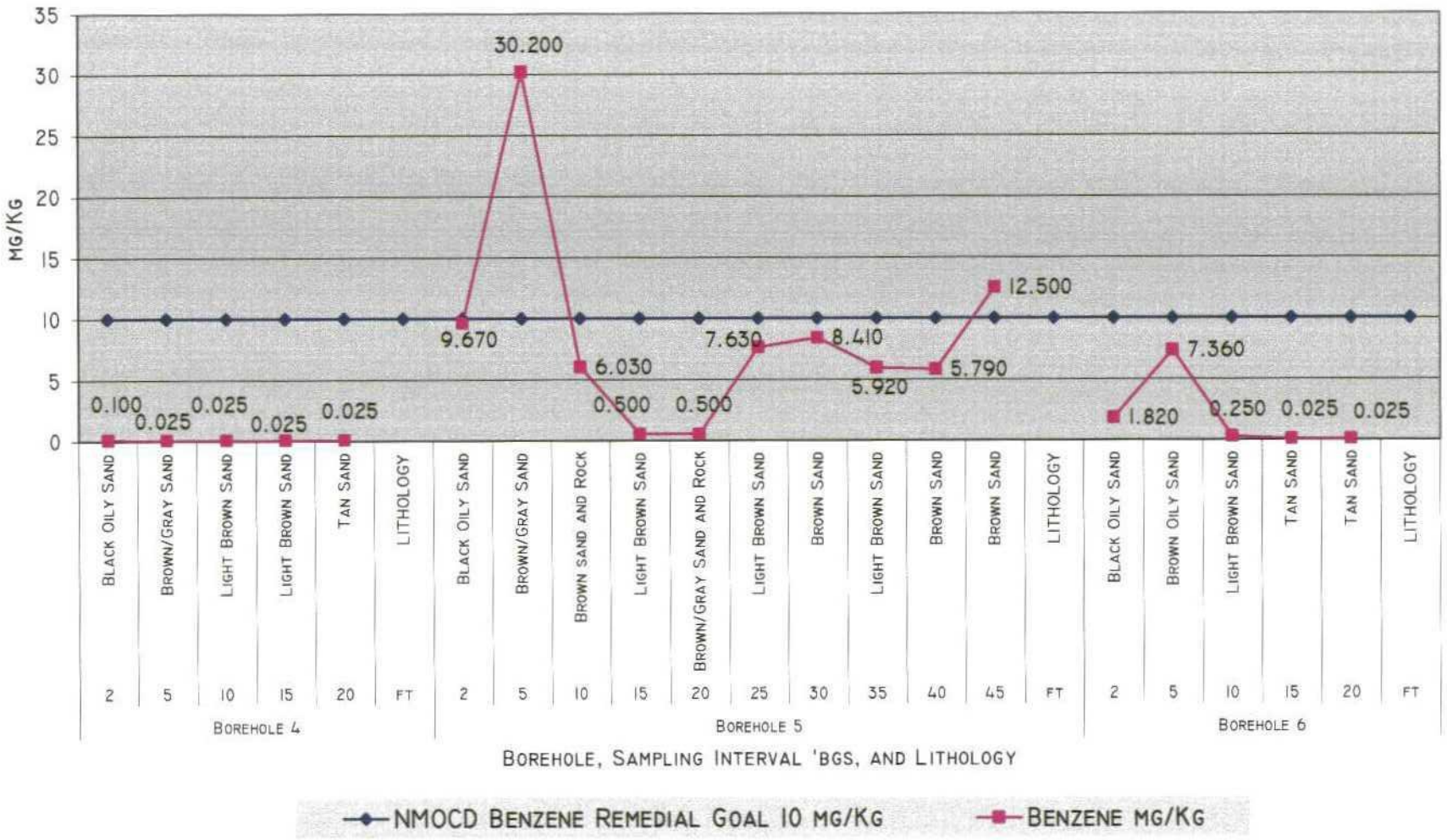
E.O.T.T. Energy Pipeline
Kimbrough Sweet
Subsurface Delineation of the Total Petroleum Hydrocarbon Concentrations
in Boreholes #7, 8, & 9



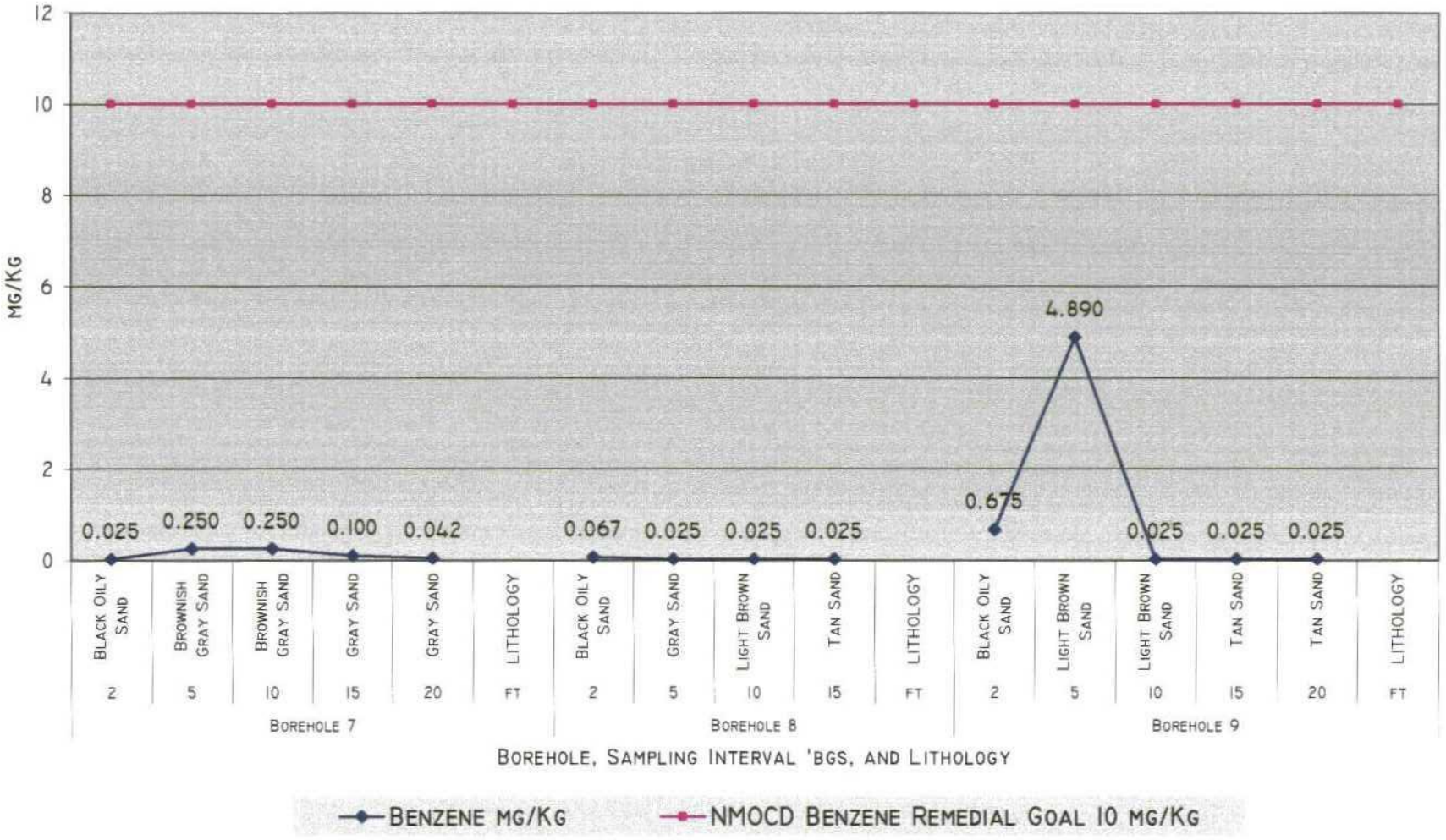
E.O.T.T. Energy Pipeline
Kimbrough Sweet
Subsurface Delineation of Benzene Concentrations in Boreholes #1, 2, & 3.



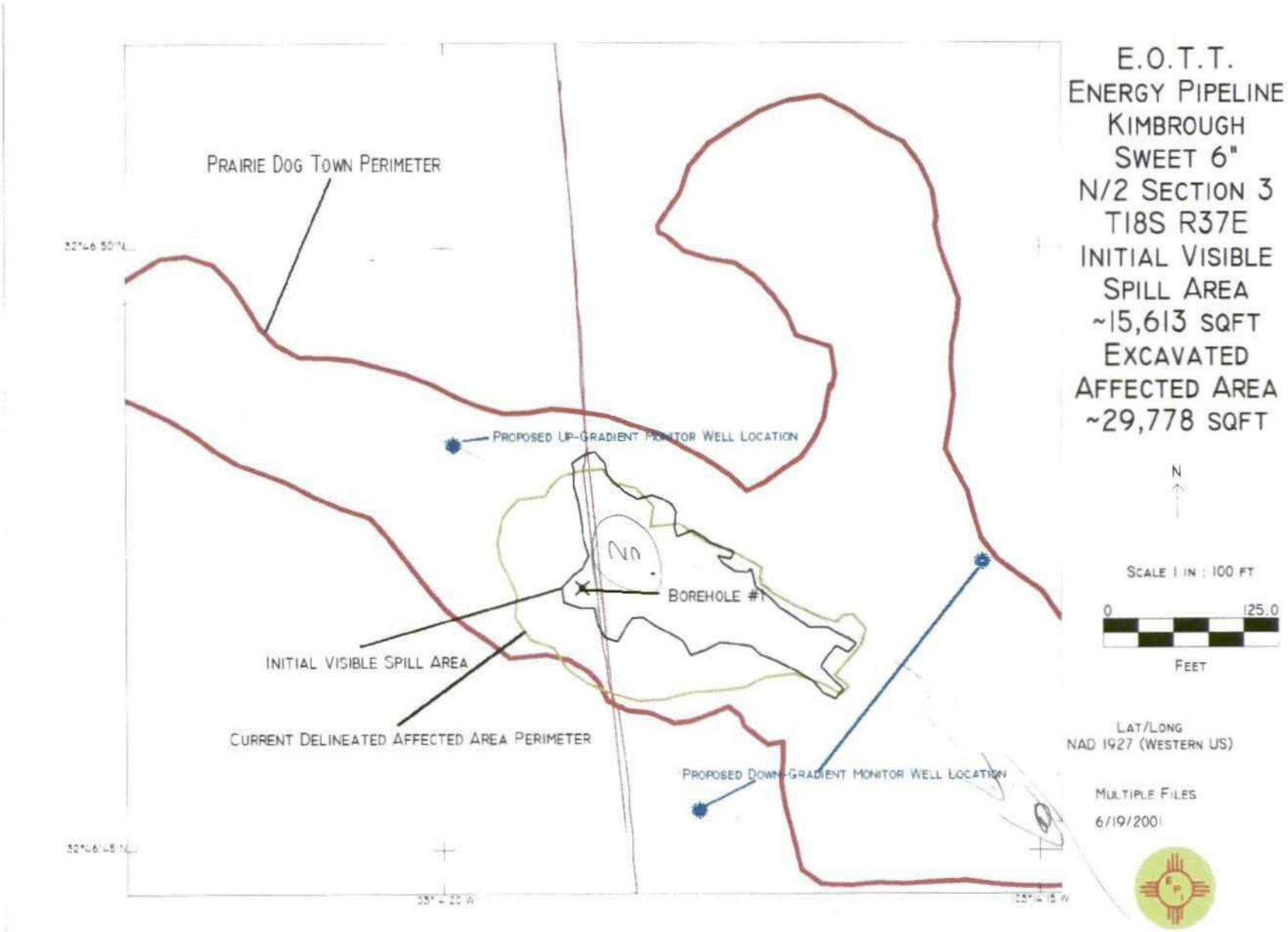
E.O.T.T. Energy Pipeline
Kimbrough Sweet
Subsurface Delineation of the Benzene Concentrations in Boreholes #4, 5, & 6

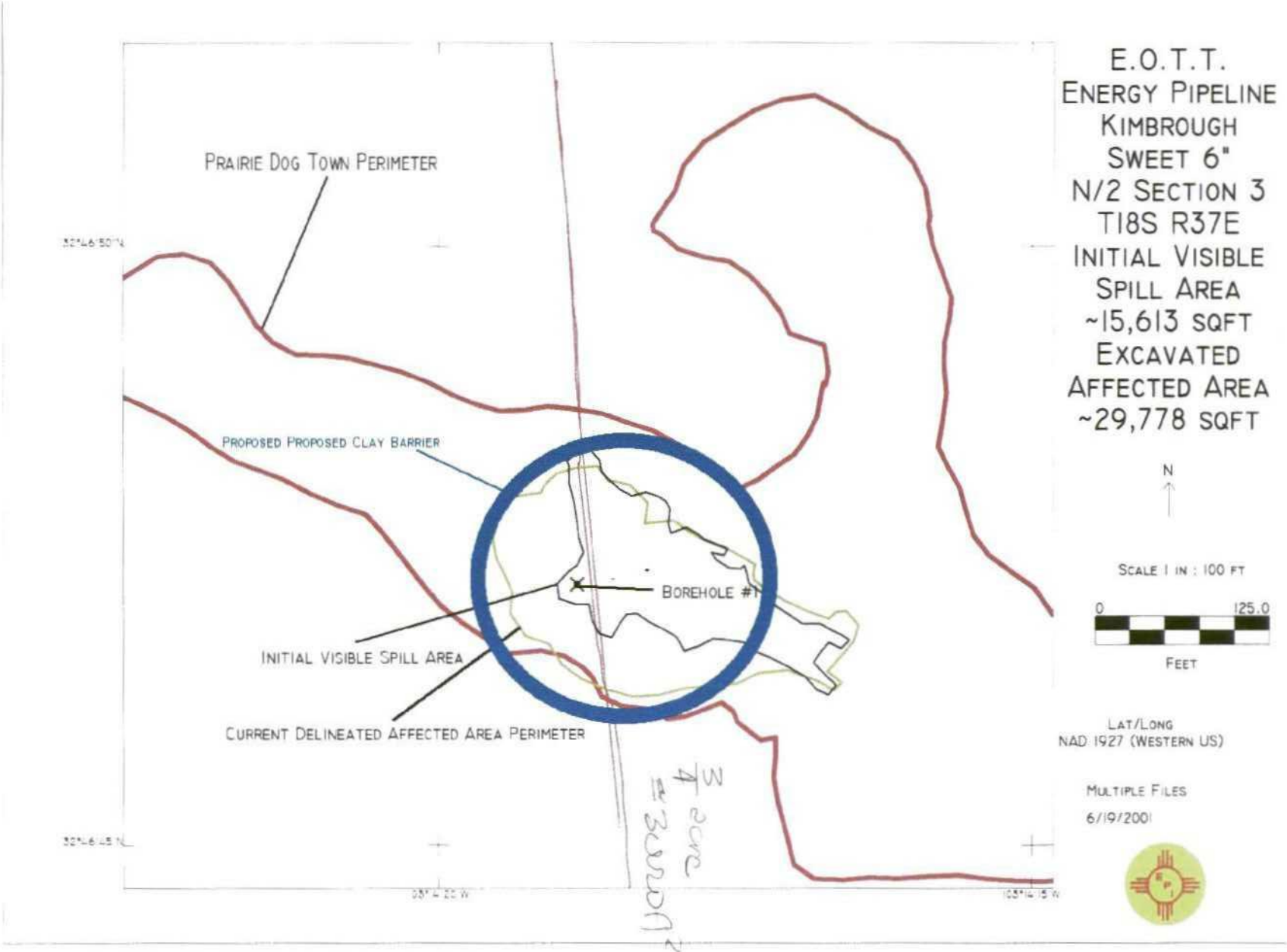


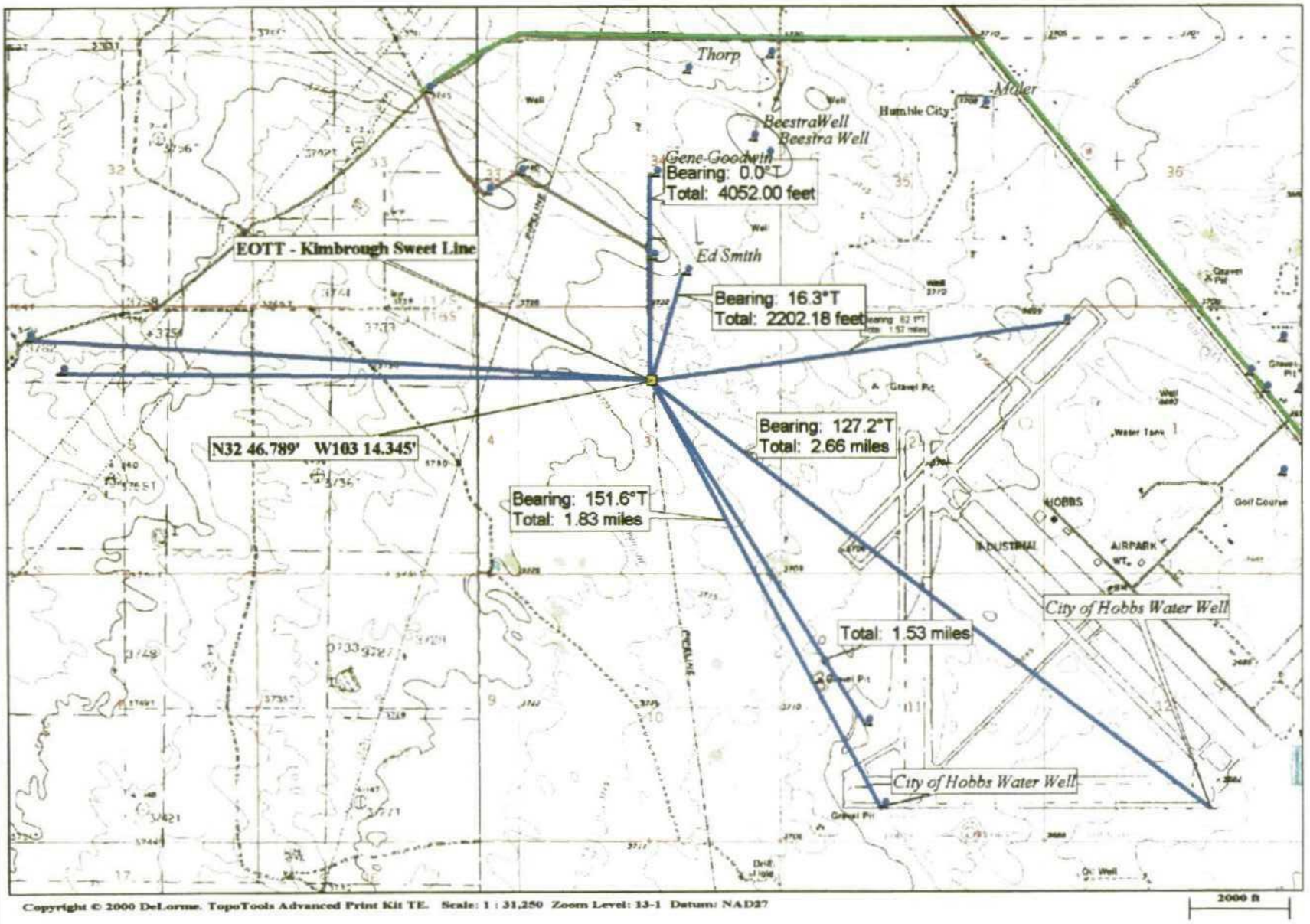
E.O.T.T. Energy Pipeline
Kimbrough Sweet
Subsurface Delineation of the Benzene Concentrations in Boreholes #7, 8, & 9



Attachment II: Figures and Maps


E.O.T.T.
ENERGY PIPELINE
KIMBROUGH
SWEET 6"
N/2 SECTION 3
T18S R37E
INITIAL VISIBLE
SPILL AREA
~15,613 SQFT
EXCAVATED
AFFECTED AREA
~29,778 SQFT
PRAIRIE DOG TOWN PERIMETER
PROPOSED UP-GRADIENT MONITOR WELL LOCATION
BOREHOLE #1
INITIAL VISIBLE SPILL AREA
CURRENT DELINEATED AFFECTED AREA PERIMETER
PROPOSED DOWN-GRADIENT MONITOR WELL LOCATION
N
SCALE 1 IN : 100 FT
0
125.0
FEET
LAT/LONG
NAD 1927 (WESTERN US)
MULTIPLE FILES
6/19/2001


E.O.T.T.
ENERGY PIPELINE
KIMBROUGH
SWEET 6"
N/2 SECTION 3
T18S R37E
INITIAL VISIBLE
SPILL AREA
~15,613 SQFT
EXCAVATED
AFFECTED AREA
~29,778 SQFT
PRAIRIE DOG TOWN PERIMETER
PROPOSED PROPOSED CLAY BARRIER
BOREHOLE #1
INITIAL VISIBLE SPILL AREA
CURRENT DELINEATED AFFECTED AREA PERIMETER
N
SCALE 1 IN : 100 FT
0
125.0
FEET
LAT/LONG
NAD 1927 (WESTERN US)
MULTIPLE FILES
6/19/2001


Thorp
Miller
Humble City
BeestraWell
Beestra Well
Gene Goodwin
Bearing: 0.0°T
Total: 4052.00 feet
EOTT - Kimbrough Sweet Line
Ed Smith
Bearing: 16.3°T
Total: 2202.18 feet
N32 46.789' W103 14.345'
Bearing: 127.2°T
Total: 2.66 miles
Bearing: 151.6°T
Total: 1.83 miles
HOBBS
INDUSTRIAL
AIRPARK
Golf Course
City of Hobbs Water Well
Total: 1.53 miles
City of Hobbs Water Well
Copyright © 2000 DeLorme. TopoTools Advanced Print Kit TE. Scale: 1 : 31,250 Zoom Level: 13-1 Datum: NAD27
2000 ft

Attachment III: Site Photographs


MAY 25 2001


JUL 3 2001

Attachment IV: Site Information and Metrics Form

Site Information and Metrics

SITE: Kimbrough Sweet	Assigned Site Reference #: 2000-10757
Company: EOTT	
Company Street Address:5805 E. Highway 80, Midland, Texas 79701	
Company Mailing Address: P.O. Box 1660	
Company City, State, Zip: Midland, Texas 79702	
Company Representative: Frank Hernandez	
Company Representative Telephone: 915.556.0190	
Company Telephone: 915.684.3451 Fax: 915.687.2713	
Fluid volume released (bbls) = 5	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: EOTT Gathering System	
Source of contamination: Pipeline Leak	
Land Owner, i.e., BLM, ST, Fee, Other: Gerald Pistole	
LSP Dimensions: affected area = 15,613 ft^2	
LSP Area = 15,613 ft^2	
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: 32° 46'48"N	
Longitude: 103°14'20"W	
Elevation above mean sea level: ~ 3720 amsl	
Feet from South Section Line	
Feet from West Section Line	
Location- Unit or ¼¼ = SE¼ of the NE¼	
Location- Section = 3	
Location- Township = 18S	
Location- Range = 37E	
Surface water body within 1000 ' radius of site:	
Surface water body within 1000 ' radius of site	
Domestic water wells within 1000' radius of site: None	
Domestic water wells within 1000' radius of site	
Agricultural water wells within 1000' radius of site:	
Agricultural water wells within 1000' radius of site	
Public water supply wells within 1000' radius of site: None	
Public water supply wells within 1000' radius of site	
Depth from land surface to ground water (DG): ~47' bgs	
Depth of contamination (DC): The lower most contamination >100 mg/Kg occurs ground water interface	
Depth to ground water (DG – DC = DtGW) 0.0' bgs	

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Ground water Score = 20	*Wellhead Protection Area Score= 0*	*Surface Water Score= 0*

Site Rank (1+2+3) = 20+0+0 = 20 points

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	10-19	0-9
Benzene[1]	**10 ppm**	10 ppm	10 ppm
BTEX[1]	**50 ppm**	50 ppm	50 ppm
TPH	**100 ppm**	1000 ppm	5000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis