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REPORTS

DATE:

2001

SITE REMEDIATION/CLOSURE REPORT

EXXONMOBIL PIPELINE COMPANY
CHAVEROO STATION
ROOSEVELT COUNTY, NEW MEXICO

PREPARED FOR:

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SECTION I. EXECUTIVE SUMMARY

This report summarizes the site investigative and remediation/closure activities conducted on behalf of ExxonMobil Pipeline Company (ExxonMobil) in regards to crude oil affected soil at the former Mobil Pipeline Company, Chaveroo Station. The site is located approximately 14 miles west of Milnesand, New Mexico in section 33, T7S-R33E of Roosevelt County. The site location is indicated on the Button Mesa NE Quadrangle U.S.G.S. topographic map presented as FIGURE 1. This report summarizes the investigative (Phase I) and remedial/closure (Phase II) activities performed in order to achieve the cleanup levels set forth by the New Mexico Oil Conservation Commission Division (NMOCD), and includes the analytical laboratory results from soil samples obtained from subsurface and surface locations at the site. Site remediation/closure activities were conducted in accordance with NMOCD "Guidelines for Remediation of Leaks, Spills, and Releases" and the BNC work plan approved by the NMOCD.

Phase I – Investigative activities included the following:

- Digging of shallow transects/trenches across the site
- Visual inspection of oil affected soil depth
- Preparation of a site remediation/closure work plan

Phase II – Remedial and closure activities include the following:

- Excavation of affected subsurface soils
- Confirmation soil sampling and testing to confirm horizontal and vertical extent of crude oil affected subsurface soil concentrations below 10 mg/kg Benzene, 50 mg/kg of total Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), and 5,000 mg/kg Total Petroleum Hydrocarbons (TPH)
- Backfilling excavations with clean non-affected soil
- Blending and mixing of excavated crude oil affected soil with clean non-affected soil
- Confirmation soil sampling and testing to confirm that the blended and mixed surface soil exhibit concentrations below 10 mg/kg Benzene, 50 mg/kg of total BTEX, and 5,000 mg/kg TPH
- Seeding, fertilizing and watering of the remediated and construction affected area

Confirmation laboratory results for subsurface soil samples and blended/mixed surface soil samples collected at the site exhibited Benzene, BTEX and TPH concentrations below the NMOCD clean-up levels of 10 mg/kg, 50 mg/kg, and 5,000 mg/kg, respectively. In addition, chloride analysis of the soil samples was performed at the request of the NMOCD. The NMOCD currently does not have a cleanup standard for chloride. However, the chloride concentrations exhibited in the surface soil samples are not expected to deter vegetation growth.

Therefore, based on the confirmation laboratory results of the remedial activities, the site meets the closure requirements of the OCD and no further action is warranted at this time.

SECTION II. REGULATORY FRAMEWORK

The NMOCD has regulatory jurisdiction over oil and gas production operations including pipeline spill/closure in the State of New Mexico. This project was conducted under the regulatory jurisdiction of the NMOCD, which requires that soil affected by a crude oil spill be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The NMOCD clean up levels are determined on a site-by-site basis, and are based on ranking criteria, which is outlined in the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases", dated August 13, 1993. These ranking criteria guidelines are based on site characteristics consisting of; depth to groundwater, wellhead protection, and distance to surface water. In order to rank the site, BNC contracted Banks Information Solutions, Inc. (BIS), located in Austin, Texas to perform a thorough and diligent search of all water wells and associated groundwater information within a one mile radius of the site. The water well search report indicated that one "stock" water well was located approximately one mile south of the site, but no other groundwater information was provided. The water well search report is provided in APPENDIX A. Therefore, BNC searched the New Mexico's State Engineers Office (NMSEO) website for depth to groundwater information. The depth to groundwater information found nearest to the site on the NMSEO website indicated groundwater to be 100-140 feet below ground surface (bgs). Additionally, the Button Mesa NE 7.5 minute quadrangle topographic map was reviewed to evaluate distance to surface water from the site. No surface water was indicated on the topographic map within 1,000 feet from the site. (See FIGURE 1 – Site Location Map).

The table below illustrates the ranking criteria, used by the NMOCD.

Criteria	Site Characteristics	Ranking Score
Depth to Ground Water	>100 feet	0
Wellhead Protection Area	>1000 feet	0
Distance to Surface Water	>1000 feet	0
	Total Ranking Score	**0**

Based on the Chaveroo site characteristics, the ranking criteria clean-up levels of 10 mg/kg Benzene, 50 mg/kg total BTEX, and 5,000 mg/kg TPH were established for closure activities at the site.

SECTION III. PHASE I – INVESTIGATIVE ACTIVITIES

SITE BACKGROUND

The site is a decommissioned pipeline pumping station, which was formerly operated by Mobil Pipeline Company (MPL). The former station encompasses approximately 1.16 acres of state lease land. The site reportedly contained one 10,000-barrel (bbl) crude oil storage tank, one 300 bbl truck off-loading tank, and associated transfer pumps. The tanks and pumps have been removed and all that remained were the tank pads, a power pole, containment dikes, a cathodic protection point, and site boundary fencing. Site details are presented on FIGURE 2.

SITE ASSESSMENT

BNC performed a Phase I site assessment on August 3, 2000, to assess the horizontal and vertical extent of crude oil and tank bottoms impact across the site, in preparation of a site remediation/closure work plan. This assessment consisted of digging approximately 75 shallow transects/trenches across the site and conducting visual and olfactory observations of the vertical extent of hydrocarbon affected soil. FIGURE 2 displays the approximate locations of each trench and the corresponding depth of visually affected soil.

The assessment indicated that the majority of the hydrocarbon affected soil at the site was limited to the upper six to twelve inches below the surface, including the containment berm. However, two areas were observed to have several feet of affected soil. One area is in the tank pad located on the south side of the site and was found to be approximately 25' x 25' x an average of six feet deep. The other area was located in the north central portion of the site in the reported location of the transfer pumps, and was found to be approximately 33' x 21'x nine feet deep. In addition, an area of affected soil was observed to extend off-site on the north and northwest sides of the fenced boundary. This affected area is in the immediate vicinity of two buried pipelines traversing in an east-west direction, and was found to be approximately 175' x 30' x an average of two feet deep. This surrounding land is also owned by the State of New Mexico. No free oil was observed during the assessment.

The assessment also identified a caliche bedrock, which was observed in the bottom of almost every trench, and therefore appears to be continuous beneath the site. This caliche was found at depths ranging from two feet in the southeast corner of the site to approximately eight feet in the former area of the pumps in the northwest portion of the site. This caliche was observed to be dry, well cemented and moderately indurated, and appeared to have retarded vertical hydrocarbon migration.

NMOCD APPROVAL OF REMEDIAL WORK PLAN

Upon completion of Phase I field activities, BNC prepared a site remediation work plan, dated September 1, 2000, that was submitted to Ms. Donna Williams of the NMOCD. This work plan was approved by Ms. Williams in a letter to ExxonMobil, dated January 8, 2001, and included five conditions be met subject to the approval of the work plan. The NMOCD letter stated that ExxonMobil will; (1) determine vertical and horizontal extent of contamination by collecting soil samples 2-3 feet below the determined clean soils and analyze the samples for Chlorides, Total Petroleum Hydrocarbons (TPH), and BTEX, (2) notify the NMOCD at least 48 hours prior to beginning work, (3) provide a plot map showing the location and depths of each sample collected, (4) obtain and analyze soil samples of the blended soils to confirm that the soils have achieved appropriate remediation levels and (5) submit a closure report by March 30, 2001 to the OCD District 1 office in Hobbs, New Mexico. The NMOCD approval letter is provided in APPENDIX B.

SECTION IV. PHASE II – REMEDIAL ACTIVITIES

Construction management consisted of the following activities:

- Conducting daily safety meetings with all field personnel
- Provide daily H2S and Benzene monitoring
- Reviewing the daily work schedule
- Establishing a grid layout for location of sampling
- Directing excavation of hydrocarbon affected soil
- Field screening native soil at the limits of the excavation for the presence of hydrocarbons
- Obtaining confirmation soil samples from the limits of the excavation for laboratory analyses
- Supervising soil mixing/blending operations
- Obtaining soil samples from the mixed/blended excavated affected soil and non affected soil for laboratory analyses
- Supervising backfilling operations
- Supervise re-seeding, fertilizing and watering of the remediated and construction affected areas

A discussion of the site remediation/closure activities is presented below.

PREMOBILIZATION

Upon acceptance of the work plan by the NMOCD and ExxonMobil, BNC initiated an underground utility and pipeline clearance through the New Mexico One Call System, on January 26, 2001. Additionally, on this day, BNC called Ms. Donna Williams and left a voice mail message stating that remedial activities were scheduled to begin on January 30, 2001. On January 29, 2001, BNC re-notified the NMOCD by facsimile sent to Ms. Williams, stating that the remedial activities start date had been revised to January 31, 2001, due to recent snow and rainy conditions at the site. A copy of the facsimile and fax transmission report is included in APPENDIX C.

HEALTH AND SAFTEY

Prior to beginning remedial construction activities, BNC conducted a site and work specific tailgate safety meeting with all personnel working at the site. In addition, BNC conducted H_2S and Benzene air monitoring during the work activities. The site-specific health and safety plan prepared by BNC is provided in APPENDIX D.

EXCAVATION AND SUBSURFACE SOIL SAMPLING

On January 31, 2001 BNC mobilized an excavator and scheduled a dozer for the following day to perform the remedial construction activities. Construction activities began with the removal of the barbed wire perimeter fencing, scrap metal, wood, and other scattered debris located on the site. BNC established a 60 feet by 60 feet grid cell pattern on site by measuring and flagging each intersecting grid cell line. The resulting twelve grid cells were designated as grid cell A through grid cell L. BNC then collected a grab sample of visually non-affected soil within each grid cell (excluding grid cells C and G) at depths ranging from one to three feet. Initially, shallow soil samples were not collected from grid cells C and G, because these areas would require excavation. Each sample was labeled and identified by the grid cell location and depth at which the sample was collected. FIGURE 3 displays grid cells A through L as an overlay on FIGURE 2 and includes the identity of each grid cell sample and corresponding sample depth.

Grid cell C corresponded to the reported former location of the transfer pumps and grid cell G corresponded to the approximate former location of the 10,000 bbl. storage tank. Remediation of these two areas were targeted in the Phase I investigation as areas requiring relatively large excavations to depths of six to nine feet. A tracked excavator was used to excavate the hydrocarbon-affected soil from these areas. In grid cell C affected soil was excavated until visibly non-affected soil was encountered at depth and in lateral extent. The size of the resulting excavation was approximately 50 feet X 30 feet X 9 feet deep. Similarly, hydrocarbon affected soil was excavated in grid cell G until visibly non-affected soil was encountered at depth and in lateral extent. The size of the resulting excavation was approximately 28' X 26' X 9' deep. After field screening the native soil at the limits of the excavations, confirmation grab soil samples were collected from the walls (north, south, east and west) and bottom of each excavation (See FIGURE 3 for excavation sampling locations). The samples were labeled and identified as to the location and depth at which the sample was collected. Excavated affected soil was stockpiled onsite for later mixing/blending with non-affected soils barrowed from adjacent areas to the north, east, and west of the site. In addition, the area of affected soil observed to extend off-site to the north side of the fenced boundary, (originally estimated to be approximately 175' x 30' x an average of two feet deep) was excavated to a depth of approximately two feet below grade. After excavation of this area, BNC used hand tools to collect a five point composite sample at an additional one-foot of depth along the traverse of this area. This sample is identified as CD(N/2)3'.

Upon completion of excavation and sampling activities the samples were delivered to TraceAnalysis, Inc., located in Lubbock, Texas. The samples were analyzed for TPH by EPA Method 8015, BTEX by EPA Method 8021B, and Chloride (CL) by EPA Method 300.0. A chain of custody accompanied the samples transport to the lab.

ANALYTICAL RESULTS – SUBSURFACE SOIL SAMPLES

Analytical results of the subsurface grab soil samples indicated that BTEX and TPH concentrations in the samples were well below the NMOCD clean up standards. The cell G South Wall-9' sample exhibited a BTEX concentration of 0.086 mg/kg, and was the only sample to exhibit a BTEX concentration above the laboratory detection limit of 0.05 mg/kg. TPH concentrations ranged from below the laboratory detection limit of 55 mg/kg to 763 mg/kg reported in the cell B-3' sample. The CD(N/2)3' sample exhibited a BTEX concentration below the laboratory detection limit and a TPH concentration of 1,040 mg/kg. Chloride concentrations exhibited in the shallow subsurface samples, ranged from 9.2 mg/kg, in the CD(N2)3' sample to 54 mg/kg in the cell D-2' sample. Relatively higher concentrations of chloride ranging from 180 mg/kg to 2,600 mg/kg were exhibited in the walls and floor samples of the cell G excavation at nine and ten feet, respectively. The relatively higher chloride concentrations in these samples are most likely due to the chemical composition of the caliche from which they were collected. However, these relatively elevated soil chloride concentrations should not have an adverse affect on re-vegetation of the site due to the depth at which they were found. A summary of the analytical results for the subsurface soil samples is presented in TABLE I, with certified laboratory analytical reports and chain of custody documentation provided in APPENDIX E.

BACKFILLING AND MIXING/BLENDING

Upon receipt of the subsurface analytical results, BNC mobilized a D-6 dozer to the site and began backfilling the excavations with clean soil located immediately adjacent to the north, east and west of the site. The soil was pushed into the excavations and compacted utilizing the dozer's tracks and weight. After backfilling the cell C, cell G, and offsite north

excavations, the dozer began leveling the affected stockpiled soil in conjunction with bringing in additional clean soil, whereby combining the affected soil with non-affected clean soil. This procedure continued until the affected soil/clean soil mix was spread out across the site. Once the dozer had leveled the mixed soil across the site, the operator began "Windrowing" the mixed soil by tilting the blade on the dozer to a 15-20 degree angle and cutting rows approximately three feet deep across the site. This process further blended the soils and was performed across the site in a north-south direction and then in an east-west direction. After this process was completed the surface was once again leveled and a final back drag pass was performed over the site. The remedial aspects of the work plan were completed on February 2, 2001.

BLENDED SURFACE SOIL SAMPLING AND RESULTS

On February 3, 2001, BNC measured the construction affected area (the area encompassing remediated soil and adjacent clean soil barrow areas) to be approximately 2.5 acres. BNC established a second grid cell arrangement across the remediated site based on a 75 feet by 75 feet grid pattern, by measuring and flagging the corners of each grid cell. The newly established pattern resulted in twelve grid cells, identified as grid cells AA through LL, and are presented in FIGURE 4. A five point composite sample of the mixed/blended surface soil was collected from each grid cell at an average depth of six to eight inches. The samples were labeled corresponding to the grid cell from which they were collected. The samples were delivered to TraceAnalysis Inc., for laboratory analysis of TPH by EPA Method 8015, BTEX by EPA Method 8021B, and Chloride (CL) by EPA Method 300.0. Blended surface soil samples AA through LL exhibited BTEX concentrations ranging from below laboratory detection limits of 0.05 mg/kg to 5.23 mg/kg in the cell KK sample. Benzene concentrations in the samples were below the laboratory detection limit, except for the sample from cell GG, which exhibited a benzene concentration of 0.064 mg/kg. TPH concentrations ranged from 138.0 mg/kg in cell LL to 733.0 mg/kg in cell EE. The analytical results from the surface samples indicate that concentrations of BTEX, Benzene and TPH are well below the NMOCD clean up standards of 50 mg/kg, 10 mg/kg and 5,000 mg/kg, respectively. Chloride concentrations in the surface samples ranged from 30 mg/kg in the cell LL sample to 470 mg/kg in the cell HH sample. A summary of the analytical results for the surface soil samples is presented in TABLE II, with copies of certified laboratory reports and chain of custody documentation provided in APPENDIX E.

RE-SEEDING, FERTILIZING AND WATERING

On February 13, 2001, BNC mobilized a tractor equipped with discs and a water truck to the site for final re-seeding, fertilizing, and watering of the construction affected area. The approximately 2.5 acre area was disked in a north-south direction, and then seeded with a BLM mixture of native grass seeds. A wire screen drag was then pulled across the site in an east-west direction to lightly cover the seed with soil. Fertilizer was then broadcast over the entire site and watering of the site was performed using a water truck equipped with a rear spray bar.

Photographic documentation of Phase I and Phase II activities are provided in APPENDIX F.

SECTION V. QA/QC PROCEDURES

FIELD SAMPLING PROCEDURES

The soil samples were obtained by personnel utilizing clean sampling tools and wearing clean, disposable latex gloves. The sampling equipment was cleaned with Alconox detergent wash and rinsed with distilled water. The soil samples were placed in sterile glass containers equipped with a Teflon-lined lid furnished by the analytical laboratory. The containers were filled to capacity with soil to limit the amount of headspace present.

The filled containers were labeled, placed on ice in an insulated cooler, and chilled to an approximate temperature of 40˚F (4˚C). The cooler was sealed for transportation to the analytical laboratory. Proper chain of custody documentation was maintained throughout the sampling process.

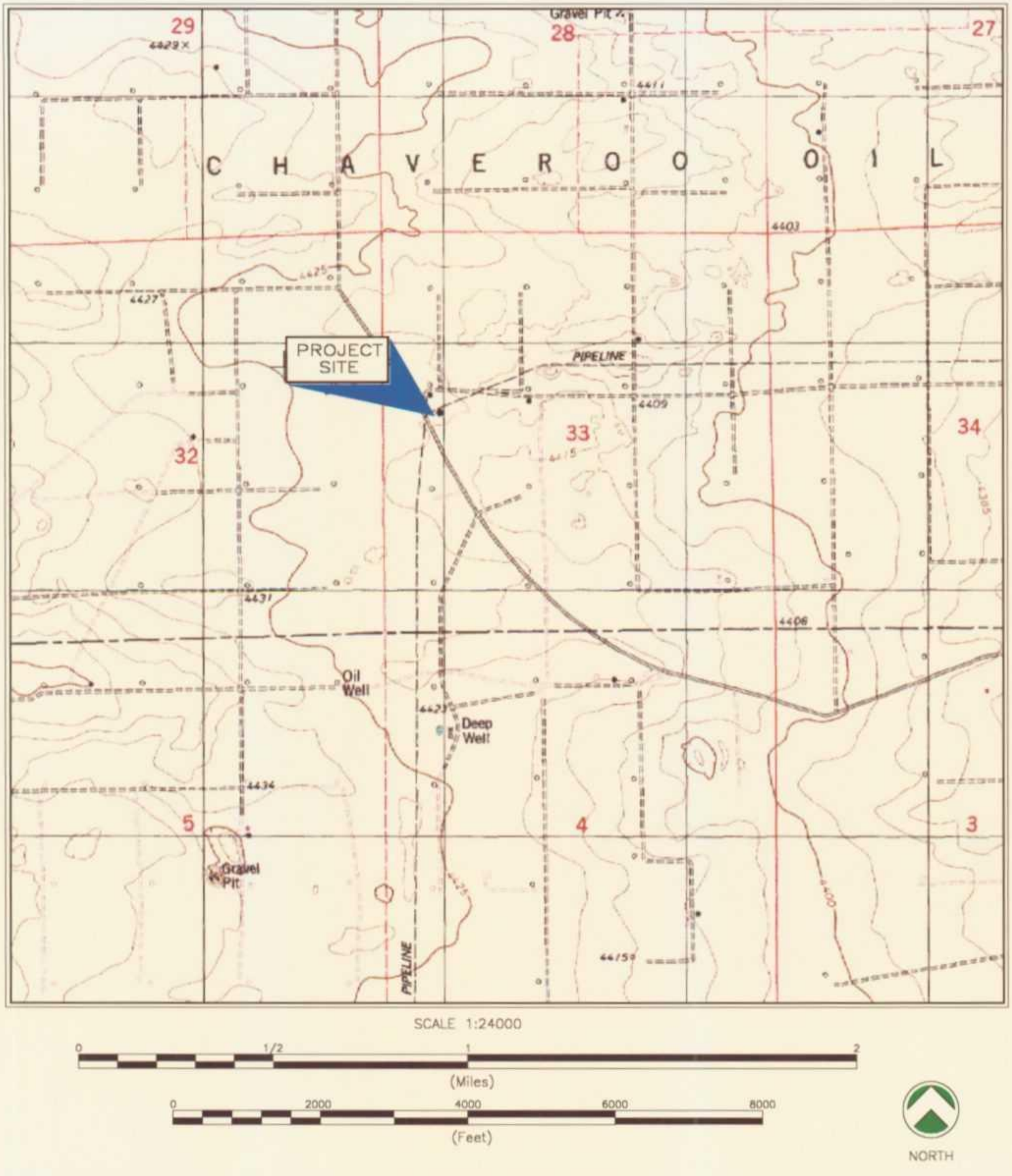
LABORATORY PROTOCOL

The laboratory was responsible for industry accepted QA/QC procedures. These procedures are transmitted with the certified laboratory reports and are on file at the laboratory.

Soil samples were transported to a certified laboratory for TPH, BTEX and Chloride analysis by EPA Methods 8015, 8021B, and 300.0, respectively. Samples were analyzed within the proper holding times, following the collection date.

BUTTON MESA NE QUADRANGLE
NEW MEXICO

LAT=33° 39' 54"
LONG=103° 34' 35"

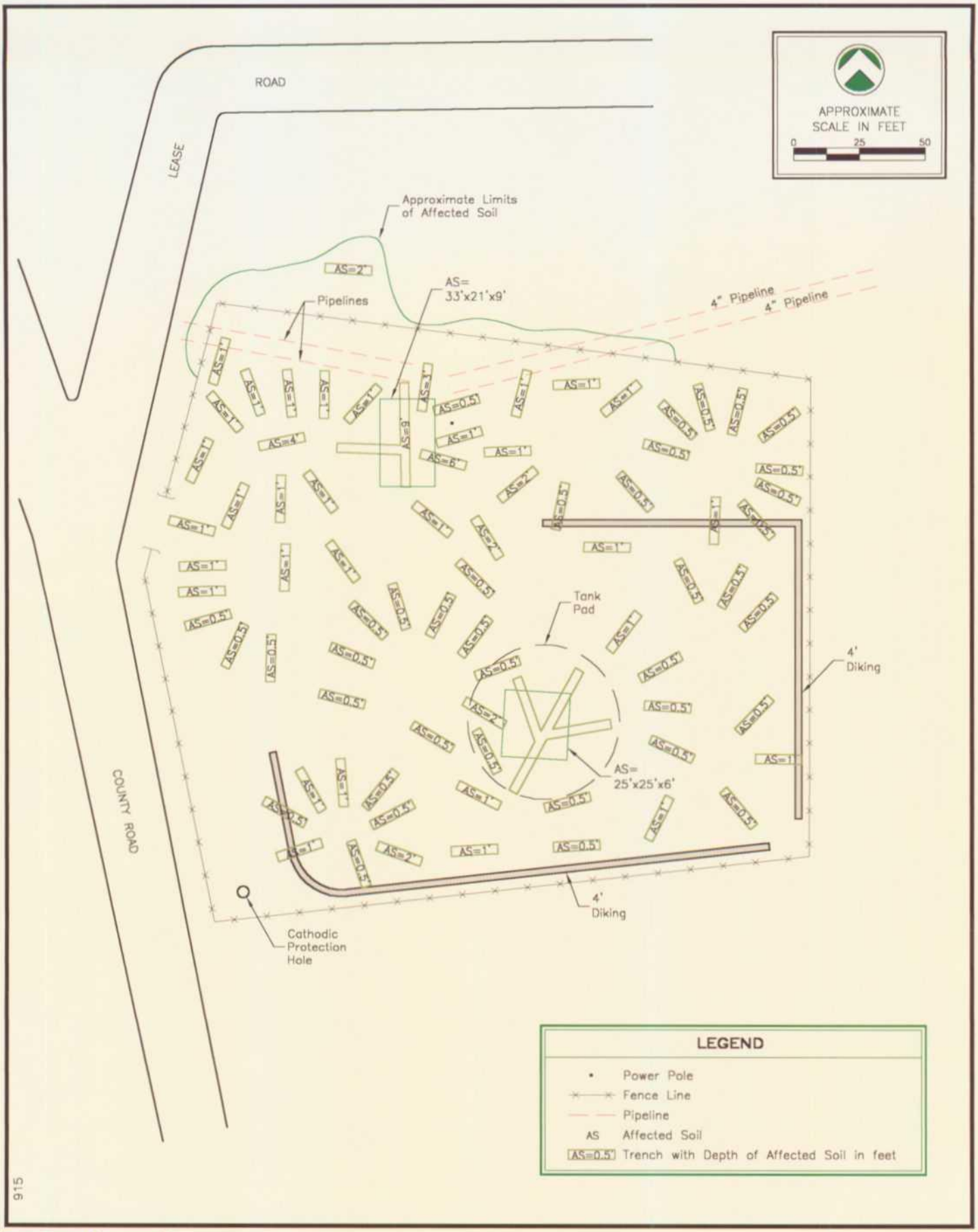


SITE LOCATION MAP

FORMER MOBIL CHAVEROO STATION
ROOSEVELT COUNTY, NEW MEXICO

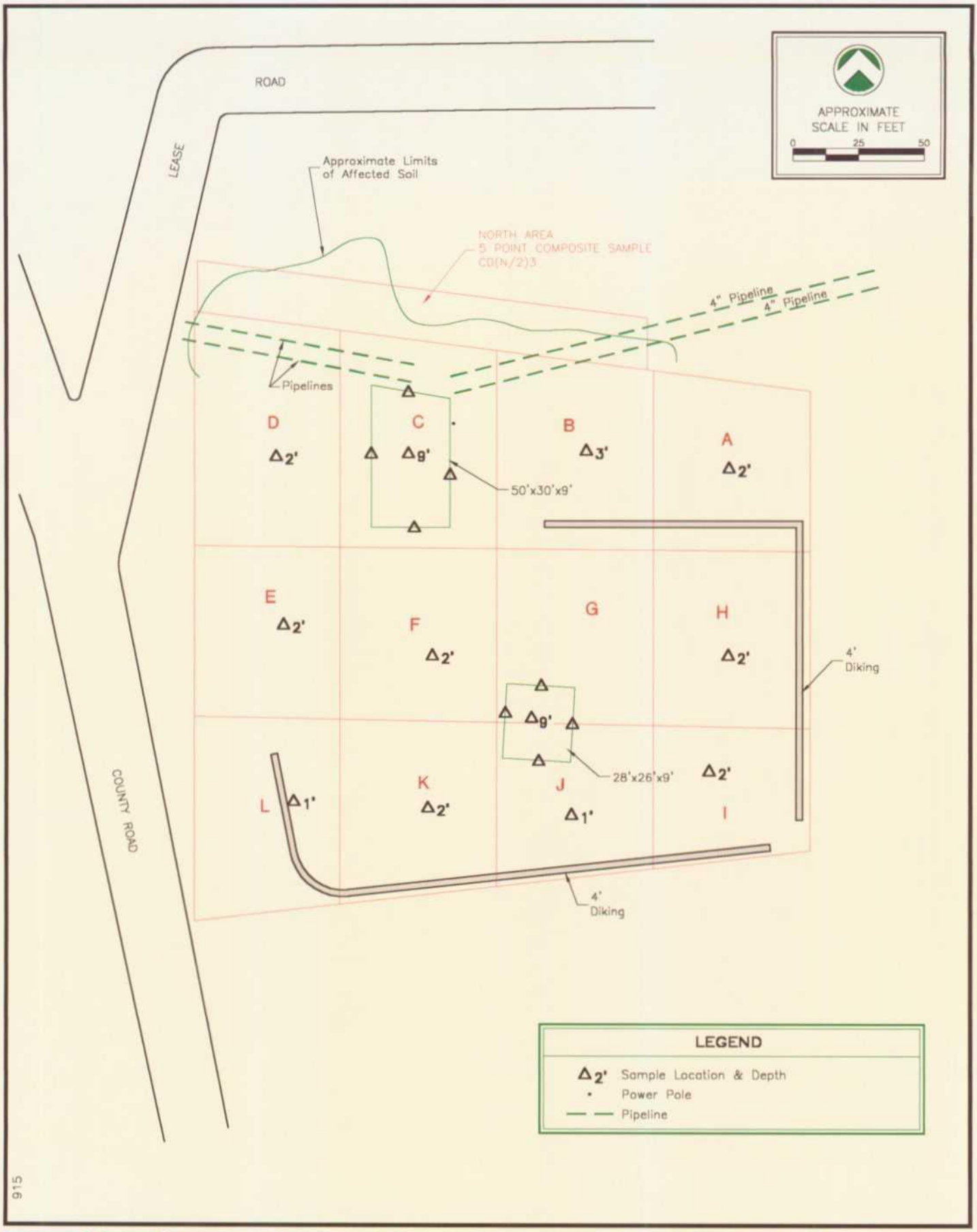
JOB No. 915

FIGURE 1

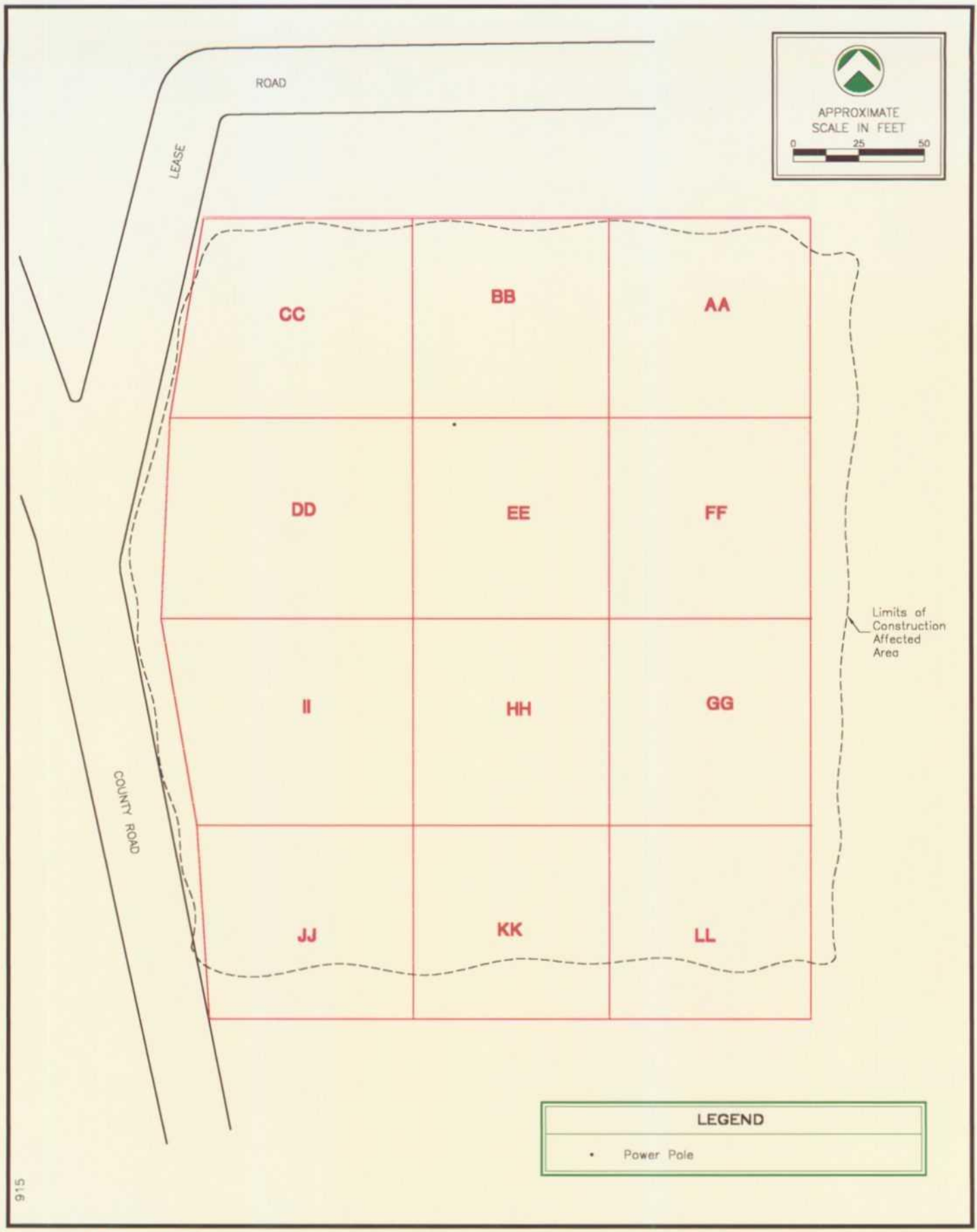


915

BNC	*SITE DETAILS* FORMER MOBIL CHAVEROO STATION ROOSEVELT COUNTY, NEW MEXICO	JOB No. 915 FIGURE 2



BNC	SUBSURFACE SOIL SAMPLE LOCATIONS — 60 X 60 GRID FORMER MOBIL CHAVEROO STATION ROOSEVELT COUNTY, NEW MEXICO	JOB No. 915 FIGURE 3



BNC

SURFACE SOIL SAMPLE LOCATIONS – 75 X 75' GRID

FORMER MOBIL CHAVEROO STATION
ROOSEVELT COUNTY, NEW MEXICO

JOB No. 915

FIGURE 4

TABLE I

LABORATORY SUBSURFACE SOIL SAMPLES - ANALYTICAL RESULTS
EXXONMOBIL PIPELINE COMPANY
CHAVEROO STATION
ROOSEVELT COUNTY, NEW MEXICO

SAMPLE ID	DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TOTAL PETROLEUM HYDROCARBONS			CHLORIDE
							DRO (mg/kg)	GRO (mg/kg)	TPH (mg/kg)	(mg/kg)
A-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	40
B-3'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	763	<5	763	24
C-East Wall-6'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	19
C-West Wall-6'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	11
C-North Wall-6'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	15
C-South Wall-6'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	9.8
C-Floor-9'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	40
D-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	80	<5	80	54
E-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	12
F-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	11	11
G-East Wall-9'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	2,600
G-West Wall-9'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	170
G-South Wall-9'	1/31/01	<0.05	<0.05	<0.05	0.086	0.086	<50	<5	<55	900
G-North Wall-9'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	610
G-Floor	2/2/01	<0.05	<0.05	<0.05	<0.05	<0.05	68	5.3	73	220
H-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	99	<5	99	180
I-1'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	77	<5	77	17
J-1'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	39
K-2'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	15
L-1'	1/31/01	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<5	<55	13
CD(N/2) 3'	2/3/01	<0.05	<0.05	<0.05	<0.05	<0.05	1,040	<5	1,040	9.2

TABLE II

LABORATORY SURFACE SOIL SAMPLES - ANALYTICAL RESULTS
EXXONMOBIL PIPELINE COMPANY
CHAVEROO STATION
ROOSEVELT COUNTY, NEW MEXICO

SAMPLE ID	DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TOTAL PETROLEUM HYDROCARBONS			CHLORIDE
							DRO (mg/kg)	GRO (mg/kg)	TPH (mg/kg)	(mg/kg)
AA	2/3/01	<0.05	<0.05	0.241	0.29	0.578	361	13.1	374.1	150
BB	2/3/01	<0.05	0.41	1.3	1.64	3.35	364	71	435	410
CC	2/3/01	<0.05	0.113	0.402	0.437	0.952	228	22.8	250.8	100
DD	2/3/01	<0.05	0.059	0.365	0.386	0.81	346	26.8	372.8	81
EE	2/3/01	<0.05	0.196	0.897	0.938	2.03	695	38.1	733.1	250
FF	2/3/01	<0.05	<0.05	0.2	0.108	0.308	234	10.1	244.1	43
GG	2/3/01	0.064	0.169	0.303	0.311	0.847	282	21.8	303.8	66
HH	2/3/01	<0.05	0.893	1.88	2.72	5.52	527	105	632	470
II	2/3/01	<0.05	0.292	1.03	1.38	2.71	454	60	514	260
JJ	2/3/01	<0.05	<0.05	0.175	0.172	0.367	300	15.4	315.4	110
KK	2/3/01	<0.05	1.06	1.78	2.36	5.23	841	67	908	420
LL	2/3/01	<0.05	<0.05	<0.05	<0.05	<0.05	138	<5	138	30

APPENDIX A

WATER WELL SEARCH REPORT

Banks Information Solutions, Inc.

Water Well Report™

September 1, 2000

CLIENT

BNC Services, Inc.
4400 N. Big Spring, Suite A-7
Midland, TX 79705

SITE

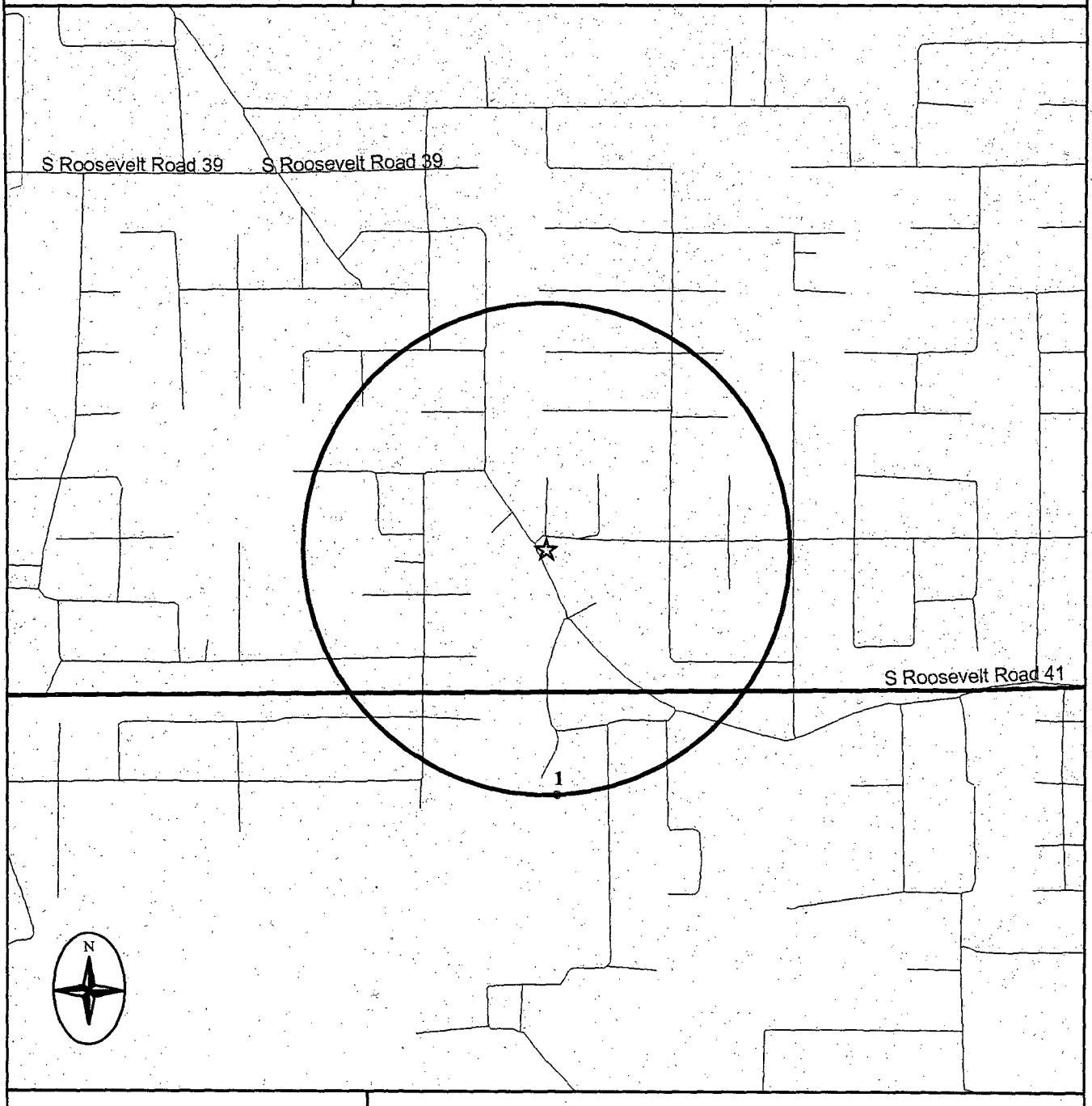
Abandoned Chaveroo Station
Roosevelt County
Milnesand, New Mexico
090100-257

P.O. Box 12851, Capitol Station, Austin, TX 78711
1701 Nueces, Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com

Banks Information Solutions, Inc.

Water Well Report™

Map of Wells within One Mile



- Subject Site
- Ground Water Wells (Cluster)
- Ground Water Well
- Airport
- Hospital
- Highway
- Primary road
- Secondary and connecting road
- Local road
- Access road
- Water body
- Park
- State

0 0.25 0.5 Miles

Banks Information Solutions, Inc.
P.O. Box 12851, Capitol Station Austin, Texas 78711
1701 Nueces Austin, Texas 78701
512-478-0059 FAX 512-478-1433 E Mail: BANKS@BANKSINFO.COM

September 1, 2000

Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	333902103343401
Banks ID	3500502412
Owner Of Well	N/A
Type Of Well	Stock
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-103.57611111
Latitude	33.6505555556

MAP ID
1

P.O. Box 12851, Capitol Station, Austin, TX 78711
1701 Nueces, Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com

Water Well Report™ Research Mapping Protocol

Banks Information Solutions, Inc. Water Well Report™ is prepared from existing state water well databases at the State Engineers Office located in Santa Fe, New Mexico. In New Mexico, water wells are located within a grid system using section, township, and range. The locations of these wells on the enclosed map were plotted using a GIS program, ArcView 3.2, with the aid of the section, township, and range of the wells provided by the drillers logs.

Banks Information Solutions, Inc. has performed a thorough and diligent search of all groundwater well information provided and recorded with the New Mexico State Engineers Office in the state's water well database. All mapped locations are based on information obtained from the NMSEO. Although Banks performs quality assurance and quality control on all research projects, we recognize that any inaccuracies of the records and mapped well locations could possibly be traced to the appropriate regulatory authority or the actual driller. It may be possible that some water well schedules and logs have never been submitted to the regulatory authority by the water driller and, thus, may explain the possible unaccountability of privately drilled wells. It is uncertain if the above listing provides 100% of the existing wells within the area of review. Therefore, Banks Information Solutions, Inc. cannot fully guarantee the accuracy of the data or well location(s) of those maps and records maintained by the New Mexico State Engineer regulatory authorities.

APPENDIX B

NMOCD APPROVAL LETTER OF REMEDIAL WORKPLAN

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

January 8, 2001

ExxonMobil
Attn: Mr. Brian McGruber
800 Bell Street
P.O. Box 2220
Houston, Texas 77252-2220

Re: Initial Site Assessment &
Site Remediation Work Plan
Sec 33-T7S-R33E
Chaveroo Station

Dear Mr. McGruber:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of the Initial Site Assessment & Site Remediation Work Plan dated September 21, 2000 that was submitted by BNC, ExxonMobil's consultant. The NMOCD hereby approves ExxonMobil's remediation plan with the following conditions:

1. ExxonMobil shall determine vertical and horizontal extent of contamination by collecting samples 2-3 feet below the determined clean soils. ExxonMobil shall test for the following constituents: Chlorides, TPH, Benzene and BTEX.
2. ExxonMobil shall notify the NMOCD at least 48 hours in advance to the scheduled activities such that the NMOCD has the opportunity to witness the events and split samples.
3. ExxonMobil shall include in the plan a plot map showing the locations and depths of each sample collected.
4. ExxonMobil shall obtain a soil sample of blended soils to confirm that the soils have achieved appropriate chloride, BTEX and TPH remediation levels.
5. ExxonMobil shall submit a report, ~~either a status report~~ or a closure report by March 30, 2001. The report will be submitted to the OCD District I Hobbs Office.

Please be advised that OCD approval does not limit ExxonMobil to the proposed work if the plan fails to adequately remediate or determine the extent of contamination related to ExxonMobil's activities, or if contamination exists which is outside the scope of the plan. In addition, OCD approval does not relieve ExxonMobil of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any further questions, or need any assistance please write or call me at (505) 393-6161 ext...113.

Sincerely,

Donna Williams ext 113

Donna Williams
Environmental Engineer Specialist

cc: Roger Anderson – Environmental Bureau Chief
Chris Williams – District I Supervisor
Gary Wink – Field Rep II

APPENDIX C

48 HOUR NOTICE TO NMOCD OF REMEDIAL ACTIVITIES

FAX TRANSMISSION
Cover Page

BNC Environmental Services, Inc.
4400 N. Big Springs STE. A-7Midland, Texas 79707
(915) 686-0086 Phone • (915) 686-0186 Fax

To: Donna Williams **Date:** 1/29/01

Company: New Mexico E, M & Nat Res Dept **Time:** 4:30 PM (Central)

Fax No.: 505/ 393-0720

Pages: 1 Including Cover

From: CRAIG ESCHBERGER

Subject: CHAVERRO STATION - REMEDIAL ACTIVITIES
Section 33, T7S-R33E - Roosevelt Co. New Mexico

Message:

DONNA, IN REFERENCE to your letter, DATED JAN 8, 2001 TO MR. BRIAN McGRUBER w/ EXXON MOBIL, PAGE 1, NUMBER 2. (NMOCD Notification)

BNC ENVIRONMENTAL SERVICES will BE OVER-SEEING REMEDIAL WORK AT THE CHAVERRO STATION ~~STATES~~ for EXXON/Mobil Beginning JAN 31, 2001.

BNC plans to collect approximately 12 soil Samples at VARYING Depths throughout the SITE - So that VERTICAL & HORIZONTAL EXTENT Be determined AS per #1 of your letter. The Soil Samples will be tested for CHLORIDES, TPH, & BTEX. IN ADDITION BNC will EXCAVATE 2 AREAS, AS described in OUR WORK Plan to a depth of ~6' & collect floor & wall Samples-
After the EXCAVATIONS HAVE Been backfilled w/ clean fill, The SURFACE SOILS will be plowed & DISC - 5 point composite Samples will be collected based on a 75'x75' GRID pattern across the SITE (~9 Samples)

I left A VOICE MAIL MESSAGE on FRI ~~(1/26/01)~~ STATING work would begin on 1/30/01 - We now Plan to START on 1/31/01

ANY Questions Please Call

* * * Transmission Result Report(MemoryTX) (Jan.29. 2001 5:39PM) * * *

1)
2)

Date/Time: Jan.29. 2001 5:38PM

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
0305	Memory TX	15053930720	P. 1	OK	

Reason for error
E.1) Hang up or line fail
E.2) Busy
E.3) No answer
E.4) No facsimile connection

BNC

BNC Environmental Services, Inc.
4400 N. Big Springs STE. A-7Midland, Texas 79707
(915) 686-0086 Phone • (915) 686-0186 Fax

FAX TRANSMISSION
Cover Page

To: Donna Williams
Company: New Mexico E,M & Nat Res Dept.
Fax No.: 505/ 393-0720
Pages: 1 Including Cover
From: CRAIG ESCHENBERG
Date: 1/29/01
Time: 4:30 PM (Central)
Subject: CHAVERRO STATION - REMEDIAL ACTIVITIES
Section 33, T7S - R33E - Roosevelt Co. New Mexico

Message:

DONNA, IN REFERENCE TO YOUR LETTER, DATED JAN 8, 2001 TO MR. BRIAN MCGRUDER W/ EXXON MOBIL, PAGE 1, NUMBER 2. (NMOCD NOTIFICATION)

BNC ENVIRONMENTAL SERVICES WILL BE OVER-SEEING REMEDIAL WORK AT THE CHAVERRO STATION [redacted] FOR EXXONMOBIL BEGINNING JAN 31, 2001.

BNC PLANS TO COLLECT APPROXIMATELY 12 SOIL SAMPLES AT VARYING DEPTHS THROUGHOUT THE SITE - SO THAT VERTICAL & HORIZONTAL EXTENT BE DETERMINED AS PER #1 OF YOUR LETTER. THE SOIL SAMPLES WILL BE TESTED FOR CHLORIDES, TPH, & BTEX. IN ADDITION BNC WILL EXCAVATE 2 AREAS, AS DESCRIBED IN OUR WORK PLAN TO A DEPTH OF ~6' & COLLECT FLOOR & WALL SAMPLES -

AFTER THE EXCAVATIONS HAVE BEEN BACKFILLED W/ CLEAN FILL, THE SURFACE SOILS WILL BE PLOWED & DISC - 5 POINT COMPOSITE SAMPLES WILL BE COLLECTED, BASED ON A 75'x75' GRID PATTERN ACROSS THE SITE (~9 SAMPLES)

I LEFT A VOICE MAIL MESSAGE ON THE [redacted] (1/26/01) STATING WORK WOULD BEGIN ON 1/30/01 - WE NOW PLAN TO START ON 1/31/01

ANY QUESTIONS PLEASE CALL

APPENDIX D

SITE SPECIFIC HEALTH AND SAFETY PLAN

SITE-SPECIFIC SAFETY AND HEALTH PLAN

CHAVEROO STATION
EXXONMOBIL PIPELINE COMPANY
Roosevelt County, New Mexico

TABLE OF CONTENTS

1.0 PURPOSE

The purpose of this site-specific safety and health plan (SHP) is to establish policies and procedures to protect personnel from potential health hazards associated with work activities at designated project site(s). Additionally, this SHP has been prepared to minimize accidents and injuries that may occur during normal daily activities. This SHP was prepared in accordance with OSHA's 29 CFR Part 1910.120 (Hazardous Waste Operations and Emergency Response).

2.0 APPLICABILITY

This SHP applies to activities related to assessment or remediation of projects that have or may have crude oil components (i.e., hydrocarbons with gases, sulfur, and nitrogen compounds). This plan is not applicable to activities conducted at sites where spills of chemicals other than crude oil or any activity for which the use of this plan is identified as inappropriate by the Safety Officer.

3.0 RESPONSIBILITY AND AUTHORITY

The Safety Coordinator (SC) has overall responsibility for safe conduct of all field work, including ensuring full implementation of this plan. The SC will attend to the daily safety and health matters in the field. The SC must be on-site, as applicable, when work is conducted at the site. The SC is authorized to stop work when working conditions become unacceptable and is authorized to dismiss from the project site any worker whose conduct endangers the safety and health of others.

4.0 PRE-ENTRY BRIEFING

Before activities begin at the site, all field personnel, including subcontractor employees, must be briefed on their work assignments and the provisions of this plan. Each person must acknowledge receipt and willingness to comply by signing the Signature Form. At a minimum, the briefing will:

- describe the assigned tasks and their potential hazards,
- coordinate activities,
- identify methods and precautions to prevent injuries,
- plan for emergencies,
- describe any changes in the site specific safety plan,
- get worker feedback on conditions affecting safety and health,
- designate emergency evacuation routes prior to beginning of work, and
- designate on-site and off-site assembly points.

As subsequent phases of a project are undertaken and as new personnel provide services, the plan and Signature Form shall be updated. The Signature Form is presented as APPENDIX A. The Site Standard Operating Procedures are presented as APPENDIX B.

5.0 SAFETY AND HEALTH INSPECTIONS

The SC will conduct frequent inspections of site conditions, facilities, equipment, and activities to determine compliance with this SHP. The frequency at which inspections will occur will be at the discretion of the SC and will vary based on the characteristics of the site, the equipment used on-site, and an evaluation of the on-site risk with respect to personnel, equipment, and property.

6.0 EMPLOYEE TRAINING

BNC employees and subcontractors are trained as per the requirements listed in 29 CFR Part 1910.120 (3). The applicable OSHA training requirements are presented below.

- General site workers (such as equipment operators, general laborers and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

- Workers on-site only occasionally for a specific limited task (such as but not limited to, ground water monitoring, land surveying, or geo-physical surveying) and who are unlikely to be exposed over the permissible exposure limits (PELs) shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

- Workers regularly on-site who work in areas which have been monitored and fully characterized indicating that exposures are under permissible exposure limits and published exposure limits where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, shall receive a minimum of 24 hours of instruction off the site and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

- On-site management and supervisors directly responsible for, or who supervise employee engaged in, hazardous waste operations shall receive 40 hours initial training, and three days of supervised field experience (the training may be reduced to 24 hours and one day if this individual only supervise workers requiring 24 hour training) and at least eight additional hours of specialized training at the time of job assignment.

7.0 SAFETY AND HEALTH RISKS

Health studies have shown that many petroleum hydrocarbons pose potential human health risk which may vary from person to person. As a precaution, exposure to crude oil or gas liquids, vapors, mists or fumes should be minimized. High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness are anesthetic, may cause unconsciousness, and may have other central nervous system effects including death. Skin contact with hot product may cause thermal burns. Prolonged or repeated contact with this product at warm or ambient temperatures tends to remove skin oils, possibly leading to irritation and dermatitis. Eye contact with hot product may cause thermal burns. Contact with this product at warm or ambient temperatures may cause eye irritation but will not damage eye tissue.

Crude oil and natural gas condensate may contain benzene as a natural constituent. Benzene can cause anemia and other blood diseases, including leukemia (cancer of the blood-forming system), after prolonged or repeated exposure to high concentrations (e.g., 50-500 PPM). OSHA regulation 29 CFR Part 1910 establishes an action level for benzene of 5 PPM and permissible exposure limited of 10 PPM as an 8-hour time weighted average.

Hydrogen sulfide gas, a crude oil/condensate component, is a rapidly acting systemic poison which causes respiratory paralysis with consequent asphyxia at high concentrations. Inhalation of high concentrations of hydrogen sulfide, 1000 to 2000 PPM, may cause coma after a single breath and may be rapidly fatal; convulsions may also occur. Exposure to concentrations of hydrogen sulfide above 50 PPM for one hour may produce acute conjunctivitis with pain, lacrimation, and photophobia. In low concentrations, hydrogen sulfide may cause headache, fatigue, irritability, insomnia, and gastrointestinal disturbances; in some what higher concentrations it affects the central nervous system, causing excitement and dizziness. Prolonged exposure to 250 PPM of hydrogen sulfide may cause pulmonary edema. Prolonged exposure to concentrations of hydrogen sulfide as low as 50 PPM may cause rhinitis, bronchitis, and pneumonitis. Repeated exposure to hydrogen sulfide results in increased susceptibility, so that eye irritation, cough, and systemic effects may result from concentrations previously tolerated without any effect. Rapid olfactory fatigue can occur at high concentrations.

Crude oil/condensate has been shown to cause skin cancer in animal tests. The substance was applied to the shaved backs of mice at regular intervals without cleanup between applications. In view of these findings there may be a potential risk of skin cancer in humans from prolonged and repeated skin contact with this product in the absence of good personal hygiene. Limited studies on oils that are very active carcinogens have shown that washing the animals' skin with soap and water between applications greatly reduces tumor formation. These studies demonstrate the effectiveness of cleansing the skin after contact.

Benzene is a minor component of crude oil with concentrations ranging from non-detectable to 5%, with gasoline typically at 1%. Benzene has been classified a known human carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH) based on the increased incidence of leukemia in certain oil refinery workers. OSHA lists benzene as a human carcinogen and its exposure limit as a single chemical is 1 PPM/8 hours.

This information was derived from NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards, NIOSH Publication No. 81-123, January 1981. Potential safety and health hazards and precautions are presented in APPENDIX C. Material Safety Data Sheets are presented in APPENDIX D.

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment is divided into four categories (Levels A, B, C and D) based on the degree of protection required. Level A (SCBA, totally-encapsulating chemical-protective suit, coveralls, gloves, steel toed/shank boots, and hard hat) is selected when the greatest level of skin, respiratory, and eye protection is required. Level B (SCBA, hooded chemical-resistant clothing, coveralls, gloves, steel toed/shank boots, and hard hat) is selected when the highest level of respiratory protection is necessary but a lesser level of skin protection is needed. Level C (air purifying respirator, hooded chemical-resistant clothing, gloves, steel toed/shank boots, hard hat, and face shield) is selected when the concentrations and types of airborne substances is known and the criteria for using air purifying respirators are met. Level D (coveralls, gloves, steel toed/shank boots, safety glasses/goggles, hard hat and face shield) is selected when a work uniform is adequate to afford the protection required to protect against nuisance contamination (29 CFR Part 1910.120).

At a minimum, the following PPE should be available on-site in appropriate sizes for use when needed:

- National Institute for Occupational Safety and Health (NIOSH) approved full or half-face respirator with combination high efficiency particulate air and organic vapor/acid gas cartridge. Respirators must be worn when airborne action levels are reached or exceeded.
- Saranex or polyethylene coated Tyvek coveralls must be worn when the services to be provided will require contact to body parts, other than just hands, with any of the contaminants listed in this SHP.
- Safety goggles or glasses must be worn at all times.
- Hard hat, steel toed shoes with the steel shank must be worn at all times.
- Nitrile gloves, neoprene gloves, or a suitable substitute must be worn when handling soil or waste impacted or potentially impacted with any of the constituents listed in this SHP.

- Neoprene or butyl rubber safety boots, calf-length, must be worn when walking on soil or waste impacted or potentially impacted with any of the constituents listed in this SHP.
- Reflective clothing must be worn in areas with heavy traffic.
- Fire extinguishers must be on-site at all times.
- Ear plugs must be used in environments where the noise level exceeds 85 dBA.

9.0 MEDICAL SURVEILLANCE

All employees who are or may be exposed to hazardous substance or health hazards at or above the PELs or, if there is no PEL, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year will be placed on BNC medical surveillance program. A licensed physician will determine whether or not personnel can work in a hazardous environment. BNC employees will not wear PPE (such as respirators, encapsulating suits, etc.) if, in the opinion of a licensed physician, the employee might suffer physical or psychological harm due to wearing the PPE. This program is administrated in accordance with 29 CFR 1910.120 (f).

10.0 MONITORING

10.1 Monitoring Instruments

Four instruments are used to monitor for a safe working environment:

- Combustible Gas/Oxygen indicator with readout in % Lower Explosive Limit (LEL) and % Oxygen (O_2).
- Photoionization (PID) field survey instrument (HNU or equivalent).
- Hydrogen Sulfide (H_2S) Monitor
- Detector Tube System

10.2 Monitoring Guidelines

Personnel exposure and area monitoring should be performed as often as necessary and wherever necessary to protect field personnel from potential health hazards associated with organic vapors and hydrogen sulfide. Monitoring must be performed by individuals trained in the calibration, use and care of the required instruments.

10.3 Toxicity Monitoring Action Levels

Initial and periodic monitoring for toxicity action levels should be conducted with the H_2S monitor and a PID when the SC deems necessary. Personnel exposure monitoring should be conducted in the worker's breathing zone, which is a one foot diameter sphere surrounding the worker's head. If vapors are measured continuously and the instrument must be unattended, the detector inlets should be located as close to the worker's breathing zone as possible. Decisions regarding respirator use will be based on breathing zone vapor concentrations of personnel expected to have the greatest exposures. Particular effort should be made to monitor personnel exposures while trenching or boring.
The toxicity action level for Benzene and H_2S is set to comply with Occupational Safety and Health Administration Permissible Exposure Limit (1 and 10 PPM, respectively). Respiratory protection must be worn when meter readings, averaged over 10 minutes, equal or exceed the action level for upgrade to Level C personal protective equipment. Workers must be evacuated from the area when Benzene, H_2S or organic vapor concentrations exceeding respirator's protection factors are encountered.

TOXICITY ACTION LEVELS
BENZENE

Instrument	Calibration Gas	Action Level to Upgrade to Level C	Action Level to Evacuate Area
Photo-ionization meter[1] (10.0 to 10.2 eV lamp)	HNU calibration gas or Benzene	0.5 ppm	5 ppm[2] 25 ppm[3]
Photo-ionization meter (10.0 to 10.2 eV lamp)	Isobutylene[4]	0.5 ppm	5 ppm[2] 25 ppm[3]

Notes:
1. Photo-ionization instruments do not work and shall not be used for work in high (>90%) humidity or rainy weather, or sites where methanol or used oil is the contaminant of concern.
2. For workers wearing half-face respirators.
3. For workers wearing full-face respirators.
4. If an alternate calibration gas is used, the expected meter reading for calibration must compensate for the difference between the two gases. Refer to the owners manual for the procedures on calibration with alternate gas.

TOXICITY ACTION LEVELS
HYDROGEN SULFIDE

Instrument	Calibration Gas	Action Level to Upgrade to Level C	Action Level to Evacuate Area
Hydrogen Sulfide Monitor	H_2S	5 ppm	10 ppm

All instruments should be calibrated both immediately prior to commencing the day's field work and after work ceases for the day. Calibration and monitoring records should be kept in the project file. Records should include workers name, dates, times, locations, temperature and humidity, calibration gas identity and concentration.

10.4 Explosive Action Levels

Explosive monitoring should be conducted when the SC deems necessary, with the detector set at a location near and downwind of the source of emission. Additional monitoring with the LEL monitor should be conducted when organic vapor concentration exceed the ppm range of the PID instrument. If 10% of the LEL is reached, initiate shut-down and evacuation procedures immediately.

The explosive action level below was set to prevent the creation of flammable or explosive atmospheres. Measurements should be taken at all locations where personnel are present or power/hand tools are used.

EXPLOSIVE ACTION LEVELS

Instrument	Action Level to Evacuate Area
Combustible Gas Indicator	10% of LEL

The Combustible Gas Indicator (CGI) alarm (if applicable) should be set to sound at the action level. Hexane, methane, or pentane calibration gas should be used for calibration. When measurements with a CGI indicate the presence of combustible gas levels equal to or exceeding the explosively action level in the work area, the following action must be taken:

- extinguish all possible ignition sources in the work area and shut down all powered equipment,
- move personnel at least 100 feet away from work area, and
- contact the Safety Officer.

After waiting 15 minutes for organic vapors to dissipate, the SC may use the CGI to cautiously approach the work area to determine the extent and concentration of organic emissions. No personnel may enter any area where CGI readings exceed the explosive action level. Personnel may reenter the work area only by clearance of the SC after the cause of the emission has been determined and the source abated.

11.0 CONFINED SPACE

Confined space is usually defined as a space with limited openings for entry or egress and may require the use of ladders, hoists, or other devices; enclosed such that adequate dilution ventilation is not obtained by natural air movement; not designed for continuous worker occupancy; may be subject to the accumulation of toxic or combustible agents; or may have an oxygen deficiency (less than 19.5% oxygen). Confined space entry procedures are not included within the scope of this SHP. If confined space entry becomes necessary, a separate confined space permitting program will be prepared.

12.0 SITE CONTROL MEASURES

Access to potentially hazardous areas must be controlled to reduce the probability of occurrence of physical injury and chemical exposure of field personnel, visitors, and the public. The boundaries of a potentially hazardous area should be identified by barricades or emergency traffic cones or posts, depending on conditions. If such areas are left unattended, signs warning of the danger and forbidding entry must be placed around the perimeter if the areas are accessible to the public. Trenches and other large holes must be guarded with wooden or metal barricades spaced no further than 20 feet apart and connected with yellow or yellow and black nylon tape no less than 3/4 inches wide. The barricades must be placed no less than two feet from the edge of the excavation or hole.

Entry to a potentially hazardous area shall be limited to individuals who must work in the area. Unofficial visitors will not be permitted to enter while work is in progress. Official visitors will not be allowed to enter a potentially hazardous area unless they are informed of the potential dangers that could be encountered in the area; sign the Signature Form, agree to abide by the provisions of this document, and follow instructions issued by the SC.

13.0 SPILL CONTAINMENT

The purpose of this section is to provide contingencies for spills resulting from crude oil liquids or materials brought to the site or produced at the site by field personnel. Every effort should be made to adhere to the procedures presented below.

- After obtaining the proper spill response tools and PPE, attempt to contain the spill so as to prevent its entry into a storm sewer, a drainage ditch, or any conveyance that eventually discharges to surface waters. Equipment and media that can be used to contain spills include absorbent material and absorbent socks.
- At the same time that containment is being conducted or as soon as possible after containment, the field personnel shall attempt to locate the source of the release and if deemed appropriate by the SC, abate the source.
- Once the spill is contained and the source eliminated, the spilled material shall be collected by the appropriate manner and placed into secured container. The area or surface in contact with the spilled material shall be decontaminated by an appropriate method that is permissible under federal, state, and

local environmental rules. The specific method used should depend upon the substance, the availability of permitted sewer discharge to a public owned treatment work (POTW), regulatory standards applicable to hazardous and toxic wastes, and other factors.

- All spill material and debris will be managed in a manner that fully complies with applicable federal, state, and local environmental rules regarding recycling or disposal of wastes. The preferred method is to recycle or reclaim materials from spills in an effort to minimize waste generation. Where this is not feasible or allowed, then the collected spilled material will be disposed of in accordance with applicable federal, state, and local rules.

14.0 DECONTAMINATION

According to 29 CFR Part 1910.120 (l), procedures must be established for those projects requiring decontamination and communicated to employees and subcontractors that will work at the site. Decontamination effectiveness must be monitored by the SC. Generally, field decontamination of personnel and equipment is required when working with petroleum substances contaminated with petroluem. BNC's decontamination procedures are presented below.

16.1 Personnel Decontamination
Contamination should be removed from skin using a mild detergent and water. Hot water is more effective than cold water. Liquid dishwashing detergent is more effective than hand soap. Decontaminated wastewater or solution will be disposed of according to federal, state and local rules.

16.2 Equipment Decontamination
Gloves, respirators, hard hats, boots and goggles should be cleaned as described above. Sampling equipment, augers, vehicle undercarriages, and tires should be steam or high-pressure washer cleaned. The steam cleaner is a convenient source of hot water for personnel and protective equipment cleaning but extreme caution must be exercised to prevent burns and equipment damage from elevated temperatures. Never use the steam cleaner directly on the skin. Decontaminated wastewater or solution will be disposed of according to federal, state and local rules.

15.0 EMERGENCY RESPONSE

All field employees have received training regarding contingency plans for site emergencies. Training was obtained through the 40-hour course on Hazardous Waste Operations and Emergency Response (OSHA 29 CFR Part 1910.120).

15.1 Emergency Response Activities

The procedures listed below should be followed during a site emergency.

- Survey the situation. Do not endanger your own life. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME unless you are qualified in rescue procedures.
- Call 911 or the fire department immediately. Explain the physical injury, chemical exposure, fire or release.

- If the victim's condition appears to be non-critical, but seems to be more severe than minor cuts, transport the victim to the nearest hospital or clinic listed. If condition is obviously serious, transportation must be done by EMS. Make certain that injured persons are accompanied to the emergency room.
- Complete the Accident/Incident Investigation Report, presented as APPENDIX E, within 24 hours and submit this document to the Safety Officer.

15.2 Emergency Contacts and Notification

A list of emergency contact numbers is presented the Emergency Contacts presented as APPENDIX F.

15.3 Emergency Medical Treatment

The SC will assume charge during a medical emergency until the ambulance arrives, or the injured person is admitted to the emergency room. The SC shall conduct the following:

- prevent further injury,
- initiate first aid and CPR (if applicable) carefully to avoid bloodborne pathogens,
- call the ambulance and hospital,
- determine if decontamination will make injury worse,
- make certain that injured person is accompanied to emergency room,
- notify the Safety Manager, and
- prepare an incident report and submit to the Safety Officer within 48 hours.

15.4 Evacuation

The following activities will be conducted during evacuation:

- Personnel will exit the work area and assemble at the off-site assembly point upon hearing the emergency signal for evacuation.
- The SC will account for all personnel in the off-site assembly zone.
- The SC and a "buddy" will remain after the site has been evacuated (if possible) to assist local responders and advise them of the nature and location of the incident.

15.5 Site Security and Control During Emergencies

- If public evacuation is necessary, responsibility for implementation lies with government authorities.
- When the Fire Department or state regulatory agent arrives, the command, control and responsibility for the site is automatically and instantly transferred to that entity.
- No one is permitted on-site during the emergency, unless exception is individually granted by the incident commander.
- Physical barriers should be immediately erected to indicate the perimeter of the incident area; nonessential personnel and the public must be kept outside of this border.
- To evacuate the public, inform local police to contact Civil Defense or other agencies.

16.0 DISCIPLINARY ACTION

Failure to adhere to and follow the policies and procedures discussed in this SHP may result in disciplinary action including termination of employment or contract.

17.0 PLAN APPROVAL

The SHP has been prepared for use by BNC and its subcontractors. BNC claims no responsibility for its use by others, unless specified and defined in project or contract documents. The plan is written for the specific site conditions, purposes, dates, and personnel specified and must be amended if these conditions change.

Plan approved by: Aaron B. Wilson Jr Date: 1/29/01

APPENDIX A

SIGNATURE FORM

I have read, understand, and agreed to abide by this site-specific safety and health plan.

COMPANY	PERSONNEL	SIGNATURE	DATE
Gandy	~~Mike~~	Mike Presher	1-31-01
Gandy		Lewis Walker	1-31-01
BNC		Craig Eschberger	1-31-01
LANDY	→ White Ranch Road Site	Steve Houston	2-1-01
Gandy	Juan Rede	Juan Rede	2-1-01
Gandy	Isidro morales	Isidro Morales	2-1-01
Gandy	manuel Iglesias	manuel Iglesias	2-1-01
BNC	Craig Eschberger	Craig Eschberger	2/1/01
GANDY		Mike Presher	2/2/01
BNC		Craig Eschberger	2/2/01
CRAIG ESCHBERGER	Craig Eschberger	BNC	2/13/01
Gandy	MARTIN TABAER	Martin Tabaer Jr	2/13/01
LANDY	R.L.SMITH	RL Smith	2/13/01
Gandy	Mike Presher	Mike Presher	2-13-01

SITE- SPECIFIC INFORMATION

Safety Coordinator: Aaron Wilson / Craig Eschberger

Site Name: Chaverro Station

Site Address: Section 33 – T7S – R33E, Roosevelt County, New Mexico

Date Site Safety Plan Prepared: 1/28/01

Date(s) of Site Work:

Site Description and Previous Usage: Site is a former pipeline pumping station, located in Chaveroo oilfield

Description and Size of Work Area: Approximately 225'X225' fenced area containing oil affected soils

Type of Area: ☒ Industrial ☐ Commercial ☐ Residential

HAZARD EVALUATION

Physical Hazards	Chemical Hazards	Biological Hazards
☒ Heat/Cold Stress	☒ Petroleum/Hydrocarbon	☒ Snakes
☐ Noise	☐ Heavy Metals	☒ Scorpions
☐ Traffic	☐ Asbestos	☒ Insects
☐ Crime	☐ PCB	☐ Other (Specify)
☒ Underground Utilities	☐ Flammable	
☐ Power Lines	☐ Corrosive	
☒ Heavy Equipment	☐ Toxic	
☐ Drum Handling	☐ Reactive	
☐ Pits, Ponds, or Surface Water	☐ Unknown	
☒ Confined Spaces/Trenches/Excavations	☐ Other (Specify)	
☐ Other (Specify)		

Work Description:

APPENDIX B

STANDARD OPERATING PROCEDURES

1. The buddy system will be used. Hand signals will be established.

2. During site operations, each worker should consider himself as a safety backup to his partner. Off-site personnel provide emergency assistance. All personnel should be aware of dangerous situations that may develop.

3. Visual contact must be maintained between buddies on-site.

4. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area designated as contaminated.

5. Prescription drugs should not be taken by personnel where the potential for contact with toxic substances exists, unless specifically approved by a qualified physician. Alcoholic beverage intake is prohibited during the work day.

6. No excessive facial hair which interferes with the satisfactory fit of respiratory protection is allowed on personnel required to wear such equipment. Each staff member must pass the fit-testing for respirators.

7. Contact lenses will not be permitted at the site.

8. Disposable clothing will be used whenever necessary to minimize the risk of cross-contamination.

9. The number of personnel and amount of equipment in any contaminated area should be minimized, but allow for effective site operations.

10. Work areas for various operational activities (equipment testing, decontamination) will be established.

11. Procedures for leaving any contaminated area will be planned and reviewed prior to going on-site.

12. Work areas and decontamination procedures will be established based on prevailing site conditions and are subject to change.

13. Wind indicators will be strategically located on-site.

14. Contact with contaminated or potentially contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, mud, or any discolored ground surface; do not kneel on the ground, lean, sit or place equipment on drum, container, vehicles, or on the ground.

15. No personnel will be admitted to the site without the proper safety equipment.

16. Proper decontamination procedures must be followed before leaving the site.

17. All Personnel must comply with established safety procedures. Any staff member who does not comply with safety policy, as established by the Safety Officer or the , will be immediately dismissed for the site.

Tailgate Safety Meetings (TGSM)

To make employees and contractors aware of safety on a daily and timely basis, the Tailgate Safety Meeting (TGSM) has been introduced as a standard practice throughout BNC.

A Tailgate Safety Meeting is to be conducted at a minimum of once every day or once every job or procedure change. Following are the objectives of a TGSM:

- Identify hazards that may interfere with safety performance and determine actions required to eliminate those hazards
- Provide a systematic approach to safety
- Work within and complement other BNC safety programs
- Provide a safe work place with zero safety incidents

Methods

Every employee is responsible for being part of a TGSM.

When working alone, individual employees can review the tasks at hand using the TGSM checklist or by conducting a Job Safety Analysis that includes all aspects of the TGSM.

Employees working as a team or working with contractors should hold TGSMs as a group. Leadership and facilitator roles should be rotated so all team members gain leadership experience and gain ownership of the process.

The Tailgate Safety Meeting begins with a review of the TGSM checklist. Meetings are held with everybody on the job every day and whenever the job or job procedures change. Note that the procedures also cover follow-up in case of an unexpected event in the course of a project.

The TGSM checklist contains a review of the Smith System® and Take Two®, both strong programs of proven benefit. Individual aspects of the job and job requirements also appear on the checklist. These are presented in this form so they may be discussed and checked off one by one. The checklist forces review of every aspect of the job at hand and gives workers and supervisors alike the opportunity to fully discuss any concerns and keep safety as the priority as the job begins.

TGSM CHECKLIST

Smith System® ❒

- Aim high in steering
- Get the big picture
- Leave yourself an out
- Make sure they see you

Take Two® ❒

- Talk: Have I talked to all concerned about what I'm going to do and how it might affect others?
  Have I talked to the right people about any way I see to make the job safer?
- Actions: How can my actions affect my own safety?
  How can my actions affect the safety of others?
- Knowledge: Do I know the procedures, the written ones and the unwritten ones?
  Do I know all of the hazards of the surroundings and the environment, and what to do about them?
- Equipment: Do I have the proper protective equipment for this job?
  Do I have the correct tools and equipment for this particular job, and are they in good condition?

Shut Down Authority	❒	Lights On	❒	Chemical Exposure	❒
Noise/Hearing Protection	❒	Backing	❒	MSDS/HAZCOM	❒
Excavation Safety & Daily Inspection	❒	Hazards w/driving	❒	Hoist/Cables/Slings/ Chains, etc.	❒
PPE	❒	Weather (changes)	❒	Proper and Adequate Training	❒
Lock Out/Tag Out	❒	Heat Stress	❒	Emergency Proc. Reviewed	❒
Written Procedures	❒	Hazards Associated w/Work Task	❒	First Aid/CPR	❒
Confined Spaces	❒	Distractions that May Affect Safety	❒	Work Attitude	❒
Respiratory Safety	❒	Safety Awareness	❒	Communications w/ Contractors	❒
Effect on Adjacent Facilities/Personnel	❒	Proper Tools	❒	State & Federal Notification	❒
Walking/Working Surfaces	❒	Work Permits	❒	Safe Electrical Work Practices	❒
JSA	❒	Ladders	❒		❒
	❒		❒		❒

BNC SERVICES
JOB SAFETY ANALYSIS WORKSHEET

INSTRUCTIONS FOR COMPLETING JOB SAFETY ANALYSIS WORKSHEET

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
Break the job down into steps. Each of the steps of a job should accomplish some major task. The task will consist of a set of movements. Look at the first set of movements used to perform a task, and then determine the next logical set of movements. For example, the job might be to move a box from a truck in the receiving area to a shelf in the storage area. How does that break down into job steps? Picking up the box from the truck and putting it on a hand truck is one logical set of movements, so it is one job step. Everything related to that one logical set of movements is part of that job step. The next logical set of movements might be pushing the loaded hand truck to the storeroom. Removing the boxes from the truck and placing them on the shelf is another logical set of movements. And finally, returning the hand truck to the receiving area might be the final step in this type of job. Be sure to list all the steps in a job. Some steps might not be done each time – checking the casters on a hand truck, for example. However, that task is a part of the job as a whole, and should be listed and analyzed. Number the steps. The number will provide a reference point for the hazards and procedures developed.	Identify the hazards associated with each step. Examine each step to find and identify hazards – actions, conditions and possibilities that could lead to an accident. Number the hazard list to correspond with your steps. It is not enough to look at the obvious hazards. It's also important to look at the entire environment and discover every conceivable hazard that might exist. Be sure to list health hazards as well, even though the harmful effect may not be immediate. A good example is the harmful effect of inhaling a solvent or chemical dust over a long period of time. It's important to list all hazards. Hazards contribute to accidents, injuries and occupational illnesses. In order to do part three of a JSA effectively, you must identify potential and existing hazards. That's why it's important to distinguish between a hazard, an accident and an injury. Each of these terms has a specific meaning: HAZARD – A potential danger. Oil on the floor is a hazard. ACCIDENT – An unintended happening that may result in injury, loss or damage. Slipping on the oil is an accident. INJURY – The result of an accident. A sprained wrist from the fall would be an injury. Some people find it easier to identify possible accidents and illnesses and work back from them to the hazards. If you do that, you can list the accident and illness types in parentheses following the hazard. But be sure you focus on the hazard for developing recommended actions and safe work procedures.	Using the first two columns as a guide, decide what actions are necessary to eliminate or minimize the hazards that could lead to an accident, injury or occupational illness. Number the actions to correspond with the steps and identified hazards. Among the actions that can be taken are (1) engineering the hazard out; (2) providing personal protective equipment; (3) job instruction training; (4) good housekeeping; and (5) good ergonomics (positioning the person in relation to the machine or other elements in the environment in such a way as to eliminate stresses and strains). List recommended safe operating procedures on the form, and also list required or recommended personal protective equipment for each step of the job. Be specific. Say exactly what needs to be done to correct the hazard, such as "lift, using your leg muscles." Avoid general statements like, "be careful." Give a recommended action or procedure for every hazard. If the hazard is a serious one, it should be corrected immediately. The JSA should then be changed to reflect the new conditions.

BNC SERVICES
JOB SAFETY ANALYSIS WORKSHEET

Job: Page of

Location Supervisor:

Date: Analysis Made By / Reviewed With:

Personal Protective Equipment required and/or recommended:

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedure

Identify HAZARDS: Is there a possibility of striking against, being struck by, or making harmful contact with an object; of being caught in, by or between objects; of slipping, tripping or falling; of developing a strain from pushing, pulling, lifting, bending or twisting; of coming in contact with electricity or other power source; of receiving a thermal or chemical burn; of being exposed to a hazardous environment?

APPENDIX C

SAFETY AND HEALTH HAZARDS	
POTENTIAL HAZARD	PRECAUTION
Traffic	Wear fluorescent safety vest. Use cones/barricades to indicate work areas.
Petroleum Products/Methanol Exposure	Stand upwind. Wear PPE as appropriate. Follow decontamination procedure.
Inclement Weather	Stop outdoor work during lightning storms. Take cover indoors or in vehicle.
High Crime Areas	Be aware of surroundings. Request police protection, if appropriate.
Flammability	LEL ≥ 10%, leave area; seek advise on changing atmosphere; DO NOT ENGAGE ANY SPARK PRODUCING SOURCE; prevent electrical engagement; investigate source.
Oxygen Deficiency (O_2 < 19.5%)	Evacuate work area.
Oxygen Enrichment (O_2 > 23.5%)	Evacuate work area.
Flying Debris/Object	Personal protective equipment (PPE). Wear hard hat, safety glasses/goggles, steel toed boots and other PPE as appropriate.
Noise > 85 dBA	Utilize noise protection (ear plugs or ear muffs).
Steep Terrain/Unstable Surface	Brace and shore equipment.
High Pressure Hose Rupture	Check to see that fitting and pressurized lines are in good repair before using.
Electrical Shock	Make certain third wire is properly grounded. Do not tamper with electrical wiring unless qualified to do so.
Suspended Loads	Work is not permitted under suspended loads.
Moving Vehicles	Back-up alarm required for heavy equipment. A spotter should remain in contact with the vehicle operator and signal safe back-up. Personnel to remain outside of turning radius.
Slip, Trip, and Fall Hazards Due to Muddy Work Areas	Use wood pallets or similar devices in muddy work areas. Wear ANSI-approved safety shoes with steel toe and shank (foot bottoms) and non-skid sole.
Falls	All employees on walking/work surfaces with unprotected sides or edges which are 6 feet or more above a lower level will be protected from falling by the use of guard rail systems, safety net systems, or personal fall arrest systems.
Back Injury	Bend knees and use legs muscles or provide mechanical lifting aids.
Overhead Electrical Wires	Heavy equipment (e.g., drill rigs and transport trucks) to remain at least 10 feet from overhead power lines of 50 kV or less. For lines rated over 50 kV, the minimum clearance is 10 feet plus 0.4 inch for each 1 kV over 50 kV.
Trenches/Excavations	Make certain trench meets OSHA standard before entering. All excavations >5 feet deep must be sloped or shored. Excavation >4 feet deep must have a ladder every 25 feet. If not entering trench, remain 2 feet from edge of trench at all times.
Protruding Objects	Flag visible objects.
Buried Utilities, Drums, Tanks, and So Forth	Locate buried utilities, drums, tanks, etc., prior to digging or drilling and mark location.

HEAT STRESS		
ILLNESS	SYMPTOMS	FIRST AID
Heat Cramps	Muscle cramps of arms, legs and/or stomach. Heavy sweating (wet skin) and extreme thirst may occur.	1. Move worker to a shady area and loosen clothing. 2. Slowly give large amounts of cool water. 3. Watch the worker. Continue to give water, if worker accepts it. 4. Get medical help if cramps continue.
Fainting	Feeling weak, dizzy, or exhausted. Temporarily lost of consciousness.	1.Victims usually recover quickly after a brief period of lying down. 2.Move around rather than standing still will usually reduce the possibility of fainting.
Heat Exhaustion	Shallow breathing, pale, cool, moist skin, dizziness, profuse sweating.	1. Move worker to a cool, shady area and loosen/remove clothing. 2. Pour water on worker and fan to permit cooling effect. 3. Have worker slowly drink cool water. 4. Elevate worker's legs. 5. Get medical help if symptoms continue; watch worker until symptoms are gone or medical help arrives.
Heat Stroke - Heat stroke is a medical emergency. Evacuate to a medical facility IMMEDIATELY.	Red, hot, dry skin, no perspiration, nausea, dizziness and confusion, strong - rapid pulse, coma, death.	1. Move worker to a cool, shady area and loosen or remove clothing (remove outer and/or protective clothing if the situation permits. 2. Start cooling the worker immediately. Immerse in water. Fan to cool. Massage extremities and skin. 3. Elevate worker's legs. 4. If conscious, have worker slowly drink cool water.
COLD STRESS		
Cold Stress	Dehydration, frostbite, heavy shivering, excessive fatigue, drowsiness, and irritability.	1. Wear warm clothing. 2. Provide heated shelters (tents, cabins, vehicles, etc.). 3. Provide warm, sweet drinks, and soups.

APPENDIX D

APPENDIX E

ACCIDENT / INCIDENT INVESTIGATION REPORT

Branch	Department / Department Manager	
ɔcation of Incident	Date of Incident Time ☐ AM ☐ PM	**Date Reported**
Property Owner		

PERSONAL INJURY		**PROPERTY DAMAGE**	
Injured's Name		Property Damaged	
Occupation	Injured Part of Body	Estimated Costs	Actual Costs
Nature of Injury		Nature of Damage	
Object/Equipment/Substance		Object/Equipment/Substance/Inflicting Damage	
Person With Most Control of Object/Equipment/Substance		Person With Most Control of Object/Equipment/Substance	

Post Accident Drug Test Required? Yes _____ No

For Injured? Yes _____ No

For Contributing Parties: List Names

Testing Scheduled By: Date of Test:

DESCRIPTION

Describe Clearly How The Accident Occurred: Attach Accident Diagram For All Motor Vehicle Accidents.

ANALYSIS

What Acts, Failures To Act And/Or Conditions Contributed Most Directly To This Accident?

LOSS SEVERITY POTENTIAL	PROBABLE RECURRENCE RATE
☐ Major ☐ Serious ☐ Minor	☐ Frequent ☐ Occasional ☐ Rare

PREVENTION

What Action Has Or Will Be Taken To Prevent Recurrence? Place X by Items Completed.

1. ☐ Date: _____
2. ☐ Date: _____
3. ☐ Date: _____
4. ☐ Date: _____
5. ☐ Date: _____
6. ☐ Date: _____

Investigated By: _____ Date: _____

Reviewed By: _____ Date: _____

Insurance Agent Notified By: _____ Date: _____

Client Notified By: _____ Date: _____

APPENDIX F

EMERGENCY CONTACTS

NO.	CONTACTS	PHONE NUMBERS
1.	BNC Safety Coordinator:	Aaron Wilson
2.	Client:	ExxonMobil
3.	Emergency Medical Service	911
4.	Fire Department: Milnesand New Mexico	505 / 675-2411
5.	Police Department (Tatum New Mexico)	505 / 398-4444
6.	Hospital: Portales New Mexico Plains regional Medical Center, 1700 South Avenue O	505 / 356-4411
7.	OSHA	800-321-6742
8.	Poison Control	800-764-7661
9.	Chemtrec	800-424-9300
10.	Texas Emergency Response Center	512-463-7727
11.	New Mexico Energy, Minerals & Natural Resources Department	505 / 3936161
12.	National Response Center	800-424-8802
13.	Texas Natural Resource Conservation Commission	512-239-2160
14.	EPA (Region 6)	214-665-2222
15.	DOT Hazardous Materials	202-366-4488

APPENDIX E

CERTIFIED LABORATORY ANALYTICAL REPORTS

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Aaron Wilson
BNC-Midland
P.O. Box 1271
Midland, Tx. 79707

Report Date: March 16, 2001

Order ID Number: A01020104

Project Number: 915-3
Project Name: Chaveroo Station
Project Location: Chaveroo Station Roosevelt Co. NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
164022	A-2'	Solid	1/31/01	10:15	1/31/01
164023	B-3'	Solid	1/31/01	10:20	1/31/01
164024	C-East Wall-6'	Solid	1/31/01	11:30	1/31/01
164025	C-West Wall-6'	Solid	1/31/01	11:42	1/31/01
164026	C-North Wall-6'	Solid	1/31/01	11:46	1/31/01
164027	C-South Wall-6'	Solid	1/31/01	11:50	1/31/01
164028	C-Floor-9'	Solid	1/31/01	11:55	1/31/01
164029	D-2'	Solid	1/31/01	12:15	1/31/01
164030	E-2'	Solid	1/31/01	12:20	1/31/01
164031	F-2'	Solid	1/31/01	12:30	1/31/01
164032	G- East Wall -9'	Solid	1/31/01	14:35	1/31/01
164033	G-West Wall-9'	Solid	1/31/01	14:45	1/31/01
164034	G- South Wall-9'	Solid	1/31/01	15:00	1/31/01
164035	G-North Wall-9'	Solid	1/31/01	15:10	1/31/01
164036	H-2'	Solid	1/31/01	13:15	1/31/01
164037	I-1'	Solid	1/31/01	13:20	1/31/01
164038	J-1'	Solid	1/31/01	13:25	1/31/01
164039	K-2'	Solid	1/31/01	13:30	1/31/01
164040	L-1'	Solid	1/31/01	13:35	1/31/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 164022 - A-2'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.83	mg/Kg	50	0.10	96	72 - 128
4-BFB		4.12	mg/Kg	50	0.10	82	72 - 128

Sample: 164022 - A-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		40	mg/Kg	1	0.50

Sample: 164022 - A-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164022 - A-2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164023 - B-3'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001

Continued ...

... Continued Sample: 164023 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.34	mg/Kg	50	0.10	86	72 - 128
4-BFB		3.93	mg/Kg	50	0.10	78	72 - 128

Sample: 164023 - B-3'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		24	mg/Kg	2	0.50

Sample: 164023 - B-3'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		763	mg/Kg	5	50

Sample: 164023 - B-3'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164024 - C-East Wall-6'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.88	mg/Kg	50	0.10	97	72 - 128
4-BFB		4.2	mg/Kg	50	0.10	84	72 - 128

Sample: 164024 - C-East Wall-6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		19	mg/Kg	2	0.50

Sample: 164024 - C-East Wall-6'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164024 - C-East Wall-6'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164025 - C-West Wall-6'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.73	mg/Kg	50	0.10	94	72 - 128
4-BFB		4	mg/Kg	50	0.10	80	72 - 128

Sample: 164025 - C-West Wall-6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		11	mg/Kg	2	0.50

Sample: 164025 - C-West Wall-6'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164025 - C-West Wall-6'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164026 - C-North Wall-6'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.82	mg/Kg	50	0.10	96	72 - 128
4-BFB		4.1	mg/Kg	50	0.10	82	72 - 128

Sample: 164026 - C-North Wall-6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		15	mg/Kg	2	0.50

Sample: 164026 - C-North Wall-6'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164026 - C-North Wall-6'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164027 - C-South Wall-6'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.88	mg/Kg	50	0.10	97	72 - 128
4-BFB		4.16	mg/Kg	50	0.10	83	72 - 128

Sample: 164027 - C-South Wall-6'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08782	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		9.8	mg/Kg	2	0.50

Sample: 164027 - C-South Wall-6'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164027 - C-South Wall-6'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164028 - C-Floor-9'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.13	mg/Kg	50	0.10	82	72 - 128
4-BFB		3.6	mg/Kg	50	0.10	72	72 - 128

Sample: 164028 - C-Floor-9'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08782	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		40	mg/Kg	5	0.50

Sample: 164028 - C-Floor-9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164028 - C-Floor-9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164029 - D-2'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.9	mg/Kg	50	0.10	98	72 - 128
4-BFB		4.35	mg/Kg	50	0.10	87	72 - 128

Sample: 164029 - D-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		54	mg/Kg	5	0.50

Sample: 164029 - D-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		80.000	mg/Kg	1	50

Sample: 164029 - D-2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164030 - E-2'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.79	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.25	mg/Kg	50	0.10	85	72 - 128

Sample: 164030 - E-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08782 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		12	mg/Kg	1	0.50

Sample: 164030 - E-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164030 - E-2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164031 - F-2'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.08	mg/Kg	50	0.10	101	72 - 128
4-BFB		4.5	mg/Kg	50	0.10	90	72 - 128

Sample: 164031 - F-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		11	mg/Kg	2	0.50

Sample: 164031 - F-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164031 - F-2'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164032 - G- East Wall -9'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.25	mg/Kg	50	0.10	85	72 - 128
4-BFB		3.77	mg/Kg	50	0.10	75	72 - 128

Sample: 164032 - G- East Wall -9'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08782	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		2600	mg/Kg	100	0.50

Sample: 164032 - G- East Wall -9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164032 - G- East Wall -9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164033 - G-West Wall-9'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.64	mg/Kg	50	0.10	92	72 - 128
4-BFB		3.99	mg/Kg	50	0.10	79	72 - 128

Sample: 164033 - G-West Wall-9'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08783	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		170	mg/Kg	5	0.50

Sample: 164033 - G-West Wall-9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164033 - G-West Wall-9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164034 - G- South Wall-9'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08889	Date Analyzed:	2/7/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07664	Date Prepared:	2/8/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		0.086	mg/Kg	50	0.001
Total BTEX		0.086	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.95	mg/Kg	50	0.10	99	72 - 128
4-BFB		4.97	mg/Kg	50	0.10	99	72 - 128

Sample: 164034 - G- South Wall-9'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		900	mg/Kg	50	0.50

Sample: 164034 - G- South Wall-9'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164034 - G- South Wall-9'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08960 Date Analyzed: 2/7/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164035 - G-North Wall-9'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	1	0.001
Toluene		<0.05	mg/Kg	1	0.001
Ethylbenzene		<0.05	mg/Kg	1	0.001
M,P,O-Xylene		<0.05	mg/Kg	1	0.001
Total BTEX		<0.05	mg/Kg	1	0.001

Sample: 164035 - G-North Wall-9'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		610	mg/Kg	50	0.50

Sample: 164035 - G-North Wall-9'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164035 - G-North Wall-9'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164036 - H-2'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.98	mg/Kg	50	0.10	99	72 - 128
4-BFB		4.42	mg/Kg	50	0.10	88	72 - 128

Sample: 164036 - H-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		180	mg/Kg	5	0.50

Sample: 164036 - H-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		99	mg/Kg	1	50

Sample: 164036 - H-2'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164037 - I-1'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.91	mg/Kg	50	0.10	98	72 - 128
4-BFB		4.33	mg/Kg	50	0.10	86	72 - 128

Sample: 164037 - I-1'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08783	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		17	mg/Kg	2	0.50

Sample: 164037 - I-1'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		77	mg/Kg	1	50

Sample: 164037 - I-1'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164038 - J-1'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.75	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.16	mg/Kg	50	0.10	83	72 - 128

Sample: 164038 - J-1'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08783	Date Analyzed:	2/2/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07584	Date Prepared:	2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		39	mg/Kg	2	0.50

Sample: 164038 - J-1'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164038 - J-1'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164039 - K-2'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08750	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.14	mg/Kg	50	0.10	102	72 - 128
4-BFB		4.57	mg/Kg	50	0.10	91	72 - 128

Sample: 164039 - K-2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		15	mg/Kg	2	0.50

Sample: 164039 - K-2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08722 Date Analyzed: 2/1/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07547 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164039 - K-2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08758 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Sample: 164040 - L-1'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08750 Date Analyzed: 2/1/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07564 Date Prepared: 2/1/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.94	mg/Kg	50	0.10	98	72 - 128
4-BFB		4.34	mg/Kg	50	0.10	86	72 - 128

Sample: 164040 - L-1'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08783 Date Analyzed: 2/2/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07584 Date Prepared: 2/2/01

Param	Flag	Result	Units	Dilution	RDL
CL		13	mg/Kg	2	0.50

Sample: 164040 - L-1'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08722	Date Analyzed:	2/1/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07547	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 164040 - L-1'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08758	Date Analyzed:	2/1/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07564	Date Prepared:	2/1/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	50	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC08722

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Method Blank

QCBatch: QC08750

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		0.01	mg/Kg	0.10	475	72 - 128
4-BFB		0.005	mg/Kg	0.10	420	72 - 128

Method Blank

QCBatch: QC08758

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Method Blank

QCBatch: QC08782

Param	Flag	Results	Units	Reporting Limit
CL		6.57	mg/Kg	0.50

Method Blank

QCBatch: QC08783

Param	Flag	Results	Units	Reporting Limit
CL		6.55	mg/Kg	0.50

Method Blank

QCBatch: QC08889

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		5.24	mg/Kg	0.10	104	72 - 128
4-BFB		4.62	mg/Kg	0.10	92	72 - 128

Method Blank QCBatch: QC08960

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Quality Control Report
Lab Control Spikes and Duplicate Spikes

LCS QC Batch: QC08722

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		246	mg/Kg	1	250	<50	98		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		210	mg/Kg	1	250	84	70 - 130

LCSD QC Batch: QC08722

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		271	mg/Kg	1	250	<50	108	10	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		188	mg/Kg	1	250	75	70 - 130

LCS QC Batch: QC08750

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.13	mg/Kg	50	0.10	<0.05	82		80 - 120	20
Benzene		4.49	mg/Kg	50	0.10	<0.05	89		80 - 120	20
Toluene		4.58	mg/Kg	50	0.10	<0.05	91		80 - 120	20
Ethylbenzene		4.46	mg/Kg	50	0.10	<0.05	89		80 - 120	20
M,P,O-Xylene		13.5	mg/Kg	50	0.30	<0.05	90		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.1	mg/Kg	50	0.10	102	72 - 128
4-BFB		4.95	mg/Kg	50	0.10	99	72 - 128

LCSD QC Batch: QC08750

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.27	mg/Kg	50	0.10	<0.05	85	3	80 - 120	20
Benzene		4.65	mg/Kg	50	0.10	<0.05	93	4	80 - 120	20
Toluene		4.75	mg/Kg	50	0.10	<0.05	95	4	80 - 120	20
Ethylbenzene		4.7	mg/Kg	50	0.10	<0.05	94	5	80 - 120	20
M,P,O-Xylene		14	mg/Kg	50	0.30	<0.05	93	4	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.1	mg/Kg	50	0.10	102	72 - 128
4-BFB		4.98	mg/Kg	50	0.10	99	72 - 128

LCS QC Batch: QC08758

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.914	mg/Kg	1	1	<5	91		70 - 130	20

LCSD QC Batch: QC08758

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.88	mg/Kg	1	1	<5	88	4	70 - 130	20

LCS QC Batch: QC08782

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[1]	18.21	mg/Kg	1	12.50	6.57	145		80 - 120	25

LCSD

QC Batch: QC08782

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[2]	18.30	mg/Kg	1	12.50	6.57	146	0	80 - 120	25

LCS

QC Batch: QC08783

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[3]	18.17	mg/Kg	1	12.50	6.55	145		80 - 120	25

LCSD

QC Batch: QC08783

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[4]	18.25	mg/Kg	1	12.50	6.55	146	0	80 - 120	25

LCS

QC Batch: QC08889

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.99	mg/Kg	50	0.10	<0.05	100		80 - 120	20
Benzene		5.07	mg/Kg	50	0.10	<0.05	102		80 - 120	20
Toluene		5.04	mg/Kg	50	0.10	<0.05	101		80 - 120	20
Ethylbenzene		5.08	mg/Kg	50	0.10	<0.05	101		80 - 120	20
M,P,O-Xylene		15.3	mg/Kg	50	0.30	<0.05	100		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.14	mg/Kg	50	0.10	103	72 - 128
4-BFB		5.14	mg/Kg	50	0.10	103	72 - 128

[1]Sample master doesn't subtract the blank from the spikes. The correct %EA = 93.
[2]Sample master doesn't subtract the blank from the spikes. The correct %EA = 94.
[3]Sample Master doesn't subtract the blank from the spikes. The correct %EA = 93.
[4]Sample Master doesn't subtract the blank from the spikes. The correct %EA = 93.

LCSD

QC Batch: QC08889

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		5.02	mg/Kg	50	0.10	<0.05	100	0	80 - 120	20
Benzene		5	mg/Kg	50	0.10	<0.05	100	1	80 - 120	20
Toluene		5.01	mg/Kg	50	0.10	<0.05	100	0	80 - 120	20
Ethylbenzene		5	mg/Kg	50	0.10	<0.05	100	2	80 - 120	20
M,P,O-Xylene		15	mg/Kg	50	0.30	<0.05	100	2	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		5.01	mg/Kg	50	0.10	100	72 - 128
4-BFB		4.99	mg/Kg	50	0.10	100	72 - 128

Quality Control Report
Matrix Spikes and Duplicate Spikes

MS

QC Batch: QC08722

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		303	mg/Kg	1	250	<50	121		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		184	mg/Kg	1	250	73	70 - 130

MSD

QC Batch: QC08722

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		313	mg/Kg	1	250	<50	125	3	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		189	mg/Kg	1	250	75	70 - 130

MS

QC Batch: QC08750

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.21	mg/Kg	50	0.10	<0.05	104	4	80 - 120	20
Toluene		5.5	mg/Kg	50	0.10	<0.05	110	4	80 - 120	20
Ethylbenzene		5.26	mg/Kg	50	0.10	<0.05	105	5	80 - 120	20
M,P,O-Xylene		15.8	mg/Kg	50	0.30	<0.05	105	4	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.92	mg/Kg	50	0.10	98	72 - 128
4-BFB		4.69	mg/Kg	50	0.10	93	72 - 128

MSD

QC Batch: QC08750

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		5.07	mg/Kg	50	0.10	<0.05	101	3	80 - 120	20
Toluene		5.28	mg/Kg	50	0.10	<0.05	105	4	80 - 120	20
Ethylbenzene		5.04	mg/Kg	50	0.10	<0.05	100	4	80 - 120	20
M,P,O-Xylene		14.8	mg/Kg	50	0.30	<0.05	98	6	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.74	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.6	mg/Kg	50	0.10	92	72 - 128

MS

QC Batch: QC08782

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		3785.17	mg/Kg	1	1250	2600	94		75 - 106	25

MSD

QC Batch: QC08782

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		3751.90	mg/Kg	1	1250	2600	92	3	75 - 106	25

MS

QC Batch: QC08783

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		1195.77	mg/Kg	1	625	610	93		75 - 106	25

MSD

QC Batch: QC08783

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		1202.14	mg/Kg	1	625	610	94	1	75 - 106	25

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QC Batch: QC08722

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	270	108	75 - 125	2/1/01
n-Octane		mg/Kg	250	212	84	75 - 125	2/1/01

CCV (2)

QC Batch: QC08722

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	255	102	75 - 125	2/1/01
n-Octane		mg/Kg	250	192	76	75 - 125	2/1/01

CCV (3)

QC Batch: QC08722

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	280	112	75 - 125	2/1/01
n-Octane		mg/Kg	250	207	82	75 - 125	2/1/01

ICV (1)

QC Batch: QC08722

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	243	97	75 - 125	2/1/01
n-Octane		mg/Kg	250	183	73	75 - 125	2/1/01

CCV (1)

QC Batch: QC08750

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.087	87	85 - 115	2/1/01
Benzene		mg/Kg	0.10	0.092	92	85 - 115	2/1/01
Toluene		mg/Kg	0.10	0.094	94	85 - 115	2/1/01
Ethylbenzene		mg/Kg	0.10	0.087	87	85 - 115	2/1/01
M,P,O-Xylene		mg/Kg	0.30	0.276	92	85 - 115	2/1/01

CCV (2)

QC Batch: QC08750

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.09	90	85 - 115	2/1/01
Benzene		mg/Kg	0.10	0.093	93	85 - 115	2/1/01
Toluene		mg/Kg	0.10	0.096	96	85 - 115	2/1/01
Ethylbenzene		mg/Kg	0.10	0.093	93	85 - 115	2/1/01
M,P,O-Xylene		mg/Kg	0.30	0.277	92	85 - 115	2/1/01

ICV (1)

QC Batch: QC08750

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.091	91	85 - 115	2/1/01
Benzene		mg/Kg	0.10	0.096	96	85 - 115	2/1/01
Toluene		mg/Kg	0.10	0.099	99	85 - 115	2/1/01
Ethylbenzene		mg/Kg	0.10	0.097	97	85 - 115	2/1/01
M,P,O-Xylene		mg/Kg	0.30	0.284	94	85 - 115	2/1/01

CCV (1)

QC Batch: QC08758

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.009	100	75 - 125	2/1/01

CCV (2) QC Batch: QC08758

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.988	98	75 - 125	2/1/01

ICV (1) QC Batch: QC08758

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.037	103	75 - 125	2/1/01

CCV (1) QC Batch: QC08782

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	80 - 120	2/2/01
CL		mg/L	12.50	11.88	95	80 - 120	2/2/01
Fluoride		mg/L	2.50	2.55	102	80 - 120	2/2/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/2/01
Sulfate		mg/L	12.50	12.44	99	80 - 120	2/2/01

ICV (1) QC Batch: QC08782

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	80 - 120	2/2/01
CL		mg/L	12.50	11.85	94	80 - 120	2/2/01
Fluoride		mg/L	2.50	2.58	103	80 - 120	2/2/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/2/01
Sulfate		mg/L	12.50	12.41	99	80 - 120	2/2/01

CCV (1) QC Batch: QC08783

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.57	102	80 - 120	2/2/01
CL		mg/L	12.50	12.00	96	80 - 120	2/2/01
Fluoride		mg/L	2.50	2.60	104	80 - 120	2/2/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/2/01
Sulfate		mg/L	12.50	12.40	99	80 - 120	2/2/01

ICV (1)

QC Batch: QC08783

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	80 - 120	2/2/01
CL		mg/L	12.50	11.88	95	80 - 120	2/2/01
Fluoride		mg/L	2.50	2.55	102	80 - 120	2/2/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/2/01
Sulfate		mg/L	12.50	12.44	99	80 - 120	2/2/01

CCV (1)

QC Batch: QC08889

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.097	97	85 - 115	2/7/01
Benzene		mg/Kg	0.10	0.097	97	85 - 115	2/7/01
Toluene		mg/Kg	0.10	0.098	98	85 - 115	2/7/01
Ethylbenzene		mg/Kg	0.10	0.098	98	85 - 115	2/7/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	2/7/01

ICV (1)

QC Batch: QC08889

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.094	94	85 - 115	2/7/01
Benzene		mg/Kg	0.10	0.096	96	85 - 115	2/7/01
Toluene		mg/Kg	0.10	0.097	97	85 - 115	2/7/01
Ethylbenzene		mg/Kg	0.10	0.098	98	85 - 115	2/7/01
M,P,O-Xylene		mg/Kg	0.30	0.287	95	85 - 115	2/7/01

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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS

LAB Order ID # A0102010

Company Name: BNC ENVIRONMENTAL SERVICES
Phone #: 915/6860086
Address: (Street, City, Zip) Houston Midland
Fax #:
Contact Person: AARON WILSON
Invoice to: (if different from above) BNC Houston
Project #: 915-1
Project Name:
Project Location: CHAVEROO STATION - ROOSEVELT CO. NM
Sampler Signature: Ray Eckler

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
14032	G-EAST WALL 9'	1	4oz		X							X		1/31/01	2:35
33	G-WEST WALL-9'	1	"		X							X		"	2:45
34	G-SOUTH WALL-9'	1	"		X							X		"	3:00
35	G-NORTH WALL-9'	1	"		X							X		"	3:10
36	H-2'	1	"		X							X		"	1:15
37	I-1'	1	"		X							X		"	1:20
38	J-1'	1	"		X							X		"	1:25
39	K-2'	1	"		X							X		"	1:30
40	L-1'	1	"		X							X		"	1:35

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Cl	TPH 8015 GRO + DRO			Turn Around Time if different from standard	Hold
	X														X	X			✓	
	X														X	X			✓	
	X														X	X			✓	
	X														X	X			✓	
	X														X	X				
	X														X	X				
	X														X	X				
	X														X	X				
	X														X	X				

nquished by: Ray Eckler Date: 1/31/01 Time:
Received by: Date: Time:
nquished by: Date: Time:
Received by: Date: Time:
nquished by: Date: Time:
Received at Laboratory by: Vicki Ansley 1-31-01 Date: Time: 5:40

mittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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Headspace Y / N
Temp °C
Log-in Review
Carrier #

REMARKS:

☐ Check if Special Reporting Limits Are Needed

701 Aberdeen Avenue, Ste. 9
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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS R

LAB Order ID # A0102010 4

Company Name: BNC ENVIRONMENTAL SERVICES
Phone #: 915/686-0086
Address: (Street, City, Zip) HOUSTON / Midland
Fax #:
Contact Person: AARON WILSON
Invoice to: (If different from above) Houston (BNC)
Project #: 915#-1
Project Name:
Project Location: CHAVEROO STATION / ROOSEVELT CO. NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CL	TPH 8015 GRO + DRO			Turn Around Time if different from standard	Hold
4022	A-2'	1			X							X		1/31/01	10:15		X														X	X			
23	B-3'	1			X							X		"	10:20		X														X	X			
24	C-EAST WALL-6'	1			X							X		"	11:30		X														X	X		✓	
25	C-WEST WALL-6' 4'	2			X							X		"	11:48		X														X	X		✓	
26	C-North WALL-6'	1			X							X		"	11:46		X														X	X		✓	
27	C-SOUTH WALL-6'	1			X							X		"	11:50		X														X	X		✓	
28	C-FLOOR-9'	1			X							X		"	11:55		X														X	X		✓	
29	D-2'	1			X							X		"	12:15		X														X	X			
30	E-2'	1			X							X		"	12:20		X														X	X			
31	F-2'	1			X							X		"	12:30		X														X	X			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	1/31/01				
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: [signature]	Date: 1-31-01	Time: 5:40 PM

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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Intact Y / N
Headspace Y / N
Temp °
Log-in Review MT

REMARKS: 2/12/01

☐ Check If Special Reporting Limits Are Needed

Carrier #

TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Craig Eschberger
BNC-Midland
P.O. Box 1271
Midland, Tx. 79707

Report Date: March 16, 2001

Order ID Number: A01020506

Project Number: 915-3
Project Name: Chaveroo Station
Project Location: Chaveroo Station Roosevelt Co. NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
164245	G Floor	Soil	2/2/01	10:00	2/2/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 164245 - G Floor

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.79	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.91	mg/Kg	50	0.10	98	72 - 128

Sample: 164245 - G Floor

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08861	Date Analyzed:	2/6/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07638	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		220	mg/Kg	5	0.50

Sample: 164245 - G Floor

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		68	mg/Kg	1	50

Sample: 164245 - G Floor

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		5.3	mg/Kg	50	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC08840

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.99	mg/Kg	0.10	99	72 - 128
4-BFB		4.81	mg/Kg	0.10	96	72 - 128

Method Blank

QCBatch: QC08842

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Method Blank

QCBatch: QC08861

Param	Flag	Results	Units	Reporting Limit
CL		4.82	mg/Kg	0.50

Method Blank

QCBatch: QC08884

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

LCS

QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.85	mg/Kg	50	0.10	<0.05	97		80 - 120	20
Benzene		4.75	mg/Kg	50	0.10	<0.05	95		80 - 120	20
Toluene		4.71	mg/Kg	50	0.10	<0.05	94		80 - 120	20
Ethylbenzene		4.76	mg/Kg	50	0.10	<0.05	95		80 - 120	20
M,P,O-Xylene		14.1	mg/Kg	50	0.30	<0.05	94		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.74	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.78	mg/Kg	50	0.10	95	72 - 128

LCSD

QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.84	mg/Kg	50	0.10	<0.05	96	0	80 - 120	20
Benzene		4.93	mg/Kg	50	0.10	<0.05	98	4	80 - 120	20
Toluene		4.91	mg/Kg	50	0.10	<0.05	98	4	80 - 120	20
Ethylbenzene		4.88	mg/Kg	50	0.10	<0.05	97	2	80 - 120	20
M,P,O-Xylene		14.7	mg/Kg	50	0.30	<0.05	98	4	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.8	mg/Kg	50	0.10	96	72 - 128
4-BFB		4.79	mg/Kg	50	0.10	95	72 - 128

LCS

QC Batch: QC08842

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.913	mg/Kg	1	1	<5	91		70 - 130	20

LCSD

QC Batch: QC08842

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.82	mg/Kg	1	1	<5	82	9	70 - 130	20

LCS

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[1]	16.24	mg/Kg	1	12.50	4.82	129		80 - 120	25

LCSD

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[2]	16.27	mg/Kg	1	12.50	4.82	130	0	80 - 120	25

LCS

QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		276	mg/Kg	1	250	<50	110		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		204	mg/Kg	1	250	81	70 - 130

LCSD

QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		305	mg/Kg	1	250	<50	122	10	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		219	mg/Kg	1	250	87	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

MS

QC Batch: QC08840

[1]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 91.
[2]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 92.

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.73	mg/Kg	50	0.10	<0.05	94		80 - 120	20
Toluene		4.82	mg/Kg	50	0.10	<0.05	96		80 - 120	20
Ethylbenzene		4.79	mg/Kg	50	0.10	<0.05	95		80 - 120	20
M,P,O-Xylene		14.4	mg/Kg	50	0.30	<0.05	96		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.74	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.76	mg/Kg	50	0.10	95	72 - 128

MSD QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.78	mg/Kg	50	0.10	<0.05	95	1	80 - 120	20
Toluene		4.83	mg/Kg	50	0.10	<0.05	96	0	80 - 120	20
Ethylbenzene		4.74	mg/Kg	50	0.10	<0.05	94	1	80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94	2	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.76	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.66	mg/Kg	50	0.10	93	72 - 128

MS QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		276.48	mg/Kg	1	62.50	220	90		75 - 106	25

MSD QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		278.25	mg/Kg	1	62.50	220	93	3	75 - 106	25

MS QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		311	mg/Kg	1	250	<50	124		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		201	mg/Kg	1	250	80	70 - 130

MSD QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		290	mg/Kg	1	250	<50	116	7	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		198	mg/Kg	1	250	79	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.093	93	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.096	96	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.293	97	85 - 115	2/5/01

CCV (2) QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.093	93	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.092	92	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.09	90	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.095	95	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.272	90	85 - 115	2/5/01

ICV (1) QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.098	98	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.098	98	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	2/5/01

CCV (1) QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.82	82	75 - 125	2/5/01

CCV (2) QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.9	90	75 - 125	2/5/01

ICV (1) QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.866	86	75 - 125	2/5/01

CCV (1) QC Batch: QC08861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.51	100	80 - 120	2/6/01
CL		mg/L	12.50	12.37	98	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.50	100	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.49	99	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.66	101	80 - 120	2/6/01

ICV (1) QC Batch: QC08861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.56	102	80 - 120	2/6/01
CL		mg/L	12.50	11.98	95	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.47	98	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.48	99	80 - 120	2/6/01

CCV (1)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	75 - 125	2/6/01
n-Octane		mg/Kg	250	207	82	75 - 125	2/6/01

CCV (2)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	75 - 125	2/6/01
n-Octane		mg/Kg	250	223	89	75 - 125	2/6/01

CCV (3)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	278	111	75 - 125	2/6/01
n-Octane		mg/Kg	250	242	96	75 - 125	2/6/01

ICV (1)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	292	116	75 - 125	2/6/01
n-Octane		mg/Kg	250	204	81	75 - 125	2/6/01

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El Paso, Texas 79932
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Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY

LAB Order ID #

Company Name: BNC ENVIRONMENTAL SERVICES Phone #: (915)686-0086

Address: (Street, City, Zip) P. BOX 1271, MIDLAND, TX 79702 Fax #: (915)686-0186

Contact Person: CRAIG ESCHBERGER

Invoice to: (If different from above) BNC-HOUSTON

Project #: 915 Project Name: CHAVEROO STATION

Project Location: ROOSEVELT CO, NM Sampler Signature: Aaron Wilson

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
245	G FLOOR	1	4oz		X							X		2/2	10:00

MTBE 8021B/602	BTEX 8021B/602	TPH ~~TX1005~~ 8015 GRO & DRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	Turn Around Time if different from standard	Hold
	X	X													X		

Relinquished by: Aaron Wilson Date: 2/2/01 Time: 17:11 Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received at Laboratory by: Nell Green Date: 2-2-01 Time: 5:11 pm

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp 1 °

Log-in Review JG

REMARKS: 2/13/01

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TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Aaron Wilson
BNC-Midland
P.O. Box 1271
Midland, Tx. 79707

Report Date: March 16, 2001

Order ID Number: A01020503

Project Number: 915-3
Project Name: Chaveroo Station
Project Location: Chaveroo Station Roosevelt Co. NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
164225	CD (N/2) 3'	Soil	2/3/01	16:00	2/3/01
164226	AA	Soil	2/3/01	10:35	2/3/01
164227	BB	Soil	2/3/01	10:45	2/3/01
164228	CC	Soil	2/3/01	10:55	2/3/01
164229	DD	Soil	2/3/01	11:10	2/3/01
164230	EE	Soil	2/3/01	11:20	2/3/01
164231	FF	Soil	2/3/01	11:25	2/3/01
164232	GG	Soil	2/3/01	11:45	2/3/01
164233	HH	Soil	2/3/01	11:55	2/3/01
164234	II	Soil	2/3/01	12:05	2/3/01
164235	JJ	Soil	2/3/01	12:10	2/3/01
164236	KK	Soil	2/3/01	12:15	2/3/01
164237	LL	Soil	2/3/01	12:25	2/3/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 164225 - CD (N/2) 3'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.9	mg/Kg	50	0.10	98	72 - 128
4-BFB		4.76	mg/Kg	50	0.10	95	72 - 128

Sample: 164225 - CD (N/2) 3'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08860	Date Analyzed:	2/6/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07638	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		9.2	mg/Kg	2	0.50

Sample: 164225 - CD (N/2) 3'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		1040	mg/Kg	5	50

Sample: 164225 - CD (N/2) 3'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

Sample: 164226 - AA

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001

Continued ...

... *Continued* Sample: 164226 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Ethylbenzene		0.241	mg/Kg	50	0.001
M,P,O-Xylene		0.29	mg/Kg	50	0.001
Total BTEX		0.578	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.68	mg/Kg	50	0.10	93	72 - 128
4-BFB		4.79	mg/Kg	50	0.10	95	72 - 128

Sample: 164226 - AA

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		150	mg/Kg	5	0.50

Sample: 164226 - AA

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		361	mg/Kg	1	50

Sample: 164226 - AA

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		13.1	mg/Kg	50	0.10

Sample: 164227 - BB

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		0.41	mg/Kg	50	0.001
Ethylbenzene		1.3	mg/Kg	50	0.001
M,P,O-Xylene		1.64	mg/Kg	50	0.001
Total BTEX		3.35	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.73	mg/Kg	50	0.10	94	72 - 128
4-BFB		5.35	mg/Kg	50	0.10	107	72 - 128

Sample: 164227 - BB

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		410	mg/Kg	10	0.50

Sample: 164227 - BB

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		364	mg/Kg	1	50

Sample: 164227 - BB

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		71	mg/Kg	50	0.10

Sample: 164228 - CC

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		0.113	mg/Kg	50	0.001
Ethylbenzene		0.402	mg/Kg	50	0.001
M,P,O-Xylene		0.437	mg/Kg	50	0.001
Total BTEX		0.952	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.7	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.83	mg/Kg	50	0.10	96	72 - 128

Sample: 164228 - CC

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		100	mg/Kg	5	0.50

Sample: 164228 - CC

Analysis: TPH DRO | Analytical Method: Mod. 8015B | QC Batch: QC08884 | Date Analyzed: 2/6/01
Analyst: BP | Preparation Method: 3550 B | Prep Batch: PB07648 | Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		228	mg/Kg	1	50

Sample: 164228 - CC

Analysis: TPH GRO | Analytical Method: 8015B | QC Batch: QC08842 | Date Analyzed: 2/5/01
Analyst: JW | Preparation Method: 5035 | Prep Batch: PB07626 | Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		22.8	mg/Kg	50	0.10

Sample: 164229 - DD

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC08840 | Date Analyzed: 2/5/01
Analyst: JW | Preparation Method: E 5035 | Prep Batch: PB07626 | Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		0.059	mg/Kg	50	0.001
Ethylbenzene		0.365	mg/Kg	50	0.001
M,P,O-Xylene		0.386	mg/Kg	50	0.001
Total BTEX		0.81	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.02	mg/Kg	50	0.10	100	72 - 128
4-BFB		5.16	mg/Kg	50	0.10	103	72 - 128

Sample: 164229 - DD

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC08860 | Date Analyzed: 2/6/01
Analyst: JS | Preparation Method: N/A | Prep Batch: PB07638 | Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		81	mg/Kg	5	0.50

Sample: 164229 - DD

Analysis: TPH DRO | Analytical Method: Mod. 8015B | QC Batch: QC08884 | Date Analyzed: 2/6/01
Analyst: BP | Preparation Method: 3550 B | Prep Batch: PB07648 | Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		346	mg/Kg	1	50

Sample: 164229 - DD

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		26.8	mg/Kg	50	0.10

Sample: 164230 - EE

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		0.196	mg/Kg	50	0.001
Ethylbenzene		0.897	mg/Kg	50	0.001
M,P,O-Xylene		0.938	mg/Kg	50	0.001
Total BTEX		2.03	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.81	mg/Kg	50	0.10	96	72 - 128
4-BFB		5.1	mg/Kg	50	0.10	102	72 - 128

Sample: 164230 - EE

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08860	Date Analyzed:	2/6/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07638	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		250	mg/Kg	10	0.50

Sample: 164230 - EE

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		695	mg/Kg	1	50

Sample: 164230 - EE

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		38.1	mg/Kg	50	0.10

Sample: 164231 - FF

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		0.2	mg/Kg	50	0.001
M,P,O-Xylene		0.108	mg/Kg	50	0.001
Total BTEX		0.308	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.76	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.78	mg/Kg	50	0.10	95	72 - 128

Sample: 164231 - FF

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		43	mg/Kg	2	0.50

Sample: 164231 - FF

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		234	mg/Kg	1	50

Sample: 164231 - FF

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		10.1	mg/Kg	50	0.10

Sample: 164232 - GG

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.064	mg/Kg	50	0.001
Toluene		0.169	mg/Kg	50	0.001
Ethylbenzene		0.303	mg/Kg	50	0.001
M,P,O-Xylene		0.311	mg/Kg	50	0.001
Total BTEX		0.847	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.62	mg/Kg	50	0.10	92	72 - 128
4-BFB		4.9	mg/Kg	50	0.10	98	72 - 128

Sample: 164232 - GG

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		66	mg/Kg	5	0.50

Sample: 164232 - GG

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		282	mg/Kg	1	50

Sample: 164232 - GG

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		21.8	mg/Kg	50	0.10

Sample: 164233 - HH

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		< 0.05	mg/Kg	50	0.001
Toluene		0.893	mg/Kg	50	0.001
Ethylbenzene		1.88	mg/Kg	50	0.001
M,P,O-Xylene		2.72	mg/Kg	50	0.001
Total BTEX		5.52	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.94	mg/Kg	50	0.10	98	72 - 128
4-BFB		5.86	mg/Kg	50	0.10	117	72 - 128

Sample: 164233 - HH

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08860 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		470	mg/Kg	10	0.50

Sample: 164233 - HH

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		527	mg/Kg	1	50

Sample: 164233 - HH

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		105	mg/Kg	50	0.10

Sample: 164234 - II

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		0.292	mg/Kg	50	0.001
Ethylbenzene		1.03	mg/Kg	50	0.001
M,P,O-Xylene		1.38	mg/Kg	50	0.001
Total BTEX		2.71	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.92	mg/Kg	50	0.10	98	72 - 128
4-BFB		5.2	mg/Kg	50	0.10	104	72 - 128

Sample: 164234 - II

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08860	Date Analyzed:	2/6/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07638	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		260	mg/Kg	10	0.50

Sample: 164234 - II

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		454	mg/Kg	1	50

Sample: 164234 - II

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		60	mg/Kg	50	0.10

Sample: 164235 - JJ

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC08840	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	E 5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		0.175	mg/Kg	50	0.001
M,P,O-Xylene		0.172	mg/Kg	50	0.001
Total BTEX		0.367	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.85	mg/Kg	50	0.10	97	72 - 128
4-BFB		4.92	mg/Kg	50	0.10	98	72 - 128

Sample: 164235 - JJ

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC08861	Date Analyzed:	2/6/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB07638	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		110	mg/Kg	5	0.50

Sample: 164235 - JJ

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC08884	Date Analyzed:	2/6/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB07648	Date Prepared:	2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		300	mg/Kg	1	50

Sample: 164235 - JJ

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC08842	Date Analyzed:	2/5/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB07626	Date Prepared:	2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		15.4	mg/Kg	50	0.10

Sample: 164236 - KK

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		1.06	mg/Kg	50	0.001
Ethylbenzene		1.78	mg/Kg	50	0.001
M,P,O-Xylene		2.36	mg/Kg	50	0.001
Total BTEX		5.23	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.18	mg/Kg	50	0.10	103	72 - 128
4-BFB		5.46	mg/Kg	50	0.10	109	72 - 128

Sample: 164236 - KK

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08861 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		420	mg/Kg	10	0.50

Sample: 164236 - KK

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		841	mg/Kg	1	50

Sample: 164236 - KK

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		67	mg/Kg	50	0.10

Sample: 164237 - LL

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC08840 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: E 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		4.73	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.86	mg/Kg	50	0.10	97	72 - 128

Sample: 164237 - LL

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC08861 Date Analyzed: 2/6/01
Analyst: JS Preparation Method: N/A Prep Batch: PB07638 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
CL		30	mg/Kg	2	0.50

Sample: 164237 - LL

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC08884 Date Analyzed: 2/6/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB07648 Date Prepared: 2/6/01

Param	Flag	Result	Units	Dilution	RDL
DRO		138	mg/Kg	1	50

Sample: 164237 - LL

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC08842 Date Analyzed: 2/5/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB07626 Date Prepared: 2/5/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC08840

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.99	mg/Kg	0.10	99	72 - 128
4-BFB		4.81	mg/Kg	0.10	96	72 - 128

Method Blank

QCBatch: QC08842

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Method Blank

QCBatch: QC08860

Param	Flag	Results	Units	Reporting Limit
CL		4.83	mg/Kg	0.50

Method Blank

QCBatch: QC08861

Param	Flag	Results	Units	Reporting Limit
CL		4.82	mg/Kg	0.50

Method Blank

QCBatch: QC08884

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Quality Control Report
Lab Control Spikes and Duplicate Spikes

LCS QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.85	mg/Kg	50	0.10	<0.05	97		80 - 120	20
Benzene		4.75	mg/Kg	50	0.10	<0.05	95		80 - 120	20
Toluene		4.71	mg/Kg	50	0.10	<0.05	94		80 - 120	20
Ethylbenzene		4.76	mg/Kg	50	0.10	<0.05	95		80 - 120	20
M,P,O-Xylene		14.1	mg/Kg	50	0.30	<0.05	94		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.74	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.78	mg/Kg	50	0.10	95	72 - 128

LCSD QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		4.84	mg/Kg	50	0.10	<0.05	96	0	80 - 120	20
Benzene		4.93	mg/Kg	50	0.10	<0.05	98	4	80 - 120	20
Toluene		4.91	mg/Kg	50	0.10	<0.05	98	4	80 - 120	20
Ethylbenzene		4.88	mg/Kg	50	0.10	<0.05	97	2	80 - 120	20
M,P,O-Xylene		14.7	mg/Kg	50	0.30	<0.05	98	4	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.8	mg/Kg	50	0.10	96	72 - 128
4-BFB		4.79	mg/Kg	50	0.10	95	72 - 128

LCS QC Batch: QC08842

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.913	mg/Kg	1	1	<5	91		70 - 130	20

LCSD QC Batch: QC08842

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.82	mg/Kg	1	1	<5	82	9	70 - 130	20

LCS QC Batch: QC08860

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[1]	16.16	mg/Kg	1	12.50	4.83	129		80 - 120	25

LCSD

QC Batch: QC08860

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[2]	16.20	mg/Kg	1	12.50	4.83	129	0	80 - 120	25

LCS

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[3]	16.24	mg/Kg	1	12.50	4.82	129		80 - 120	25

LCSD

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[4]	16.27	mg/Kg	1	12.50	4.82	130	0	80 - 120	25

LCS

QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		276	mg/Kg	1	250	<50	110		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		204	mg/Kg	1	250	81	70 - 130

LCSD

QC Batch: QC08884

[1]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 91.
[2]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 91.
[3]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 91.
[4]Sample Master doesn't subtract the blank from the blank spikes. The correct %EA = 92.

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		305	mg/Kg	1	250	<50	122	10	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		219	mg/Kg	1	250	87	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

MS

QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.73	mg/Kg	50	0.10	<0.05	94		80 - 120	20
Toluene		4.82	mg/Kg	50	0.10	<0.05	96		80 - 120	20
Ethylbenzene		4.79	mg/Kg	50	0.10	<0.05	95		80 - 120	20
M,P,O-Xylene		14.4	mg/Kg	50	0.30	<0.05	96		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.74	mg/Kg	50	0.10	94	72 - 128
4-BFB		4.76	mg/Kg	50	0.10	95	72 - 128

MSD

QC Batch: QC08840

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		4.78	mg/Kg	50	0.10	<0.05	95	1	80 - 120	20
Toluene		4.83	mg/Kg	50	0.10	<0.05	96	0	80 - 120	20
Ethylbenzene		4.74	mg/Kg	50	0.10	<0.05	94	1	80 - 120	20
M,P,O-Xylene		14.2	mg/Kg	50	0.30	<0.05	94	2	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		4.76	mg/Kg	50	0.10	95	72 - 128
4-BFB		4.66	mg/Kg	50	0.10	93	72 - 128

MS

QC Batch: QC08860

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		369.92	mg/Kg	1	125	260	87		75 - 106	25

MSD

QC Batch: QC08860

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		371.91	mg/Kg	1	125	260	89	2	75 - 106	25

MS

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		276.48	mg/Kg	1	62.50	220	90		75 - 106	25

MSD

QC Batch: QC08861

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		278.25	mg/Kg	1	62.50	220	93	3	75 - 106	25

MS

QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		311	mg/Kg	1	250	<50	124		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		201	mg/Kg	1	250	80	70 - 130

MSD

QC Batch: QC08884

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		290	mg/Kg	1	250	<50	116	7	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		198	mg/Kg	1	250	79	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.093	93	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.096	96	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.293	97	85 - 115	2/5/01

CCV (2)

QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.093	93	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.092	92	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.09	90	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.095	95	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.272	90	85 - 115	2/5/01

ICV (1)

QC Batch: QC08840

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.098	98	85 - 115	2/5/01
Benzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
Toluene		mg/Kg	0.10	0.098	98	85 - 115	2/5/01
Ethylbenzene		mg/Kg	0.10	0.097	97	85 - 115	2/5/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	2/5/01

CCV (1)

QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.82	82	75 - 125	2/5/01

CCV (2)

QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.9	90	75 - 125	2/5/01

ICV (1)

QC Batch: QC08842

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.866	86	75 - 125	2/5/01

CCV (1)

QC Batch: QC08860

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.56	102	80 - 120	2/6/01
CL		mg/L	12.50	11.98	95	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.47	98	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.48	99	80 - 120	2/6/01

ICV (1)

QC Batch: QC08860

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.57	102	80 - 120	2/6/01
CL		mg/L	12.50	12.19	97	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.50	100	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.45	98	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.53	100	80 - 120	2/6/01

CCV (1)

QC Batch: QC08861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.51	100	80 - 120	2/6/01
CL		mg/L	12.50	12.37	98	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.50	100	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.49	99	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.66	101	80 - 120	2/6/01

ICV (1)

QC Batch: QC08861

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.56	102	80 - 120	2/6/01
CL		mg/L	12.50	11.98	95	80 - 120	2/6/01
Fluoride		mg/L	2.50	2.47	98	80 - 120	2/6/01
Nitrate-N		mg/L	2.50	2.47	98	80 - 120	2/6/01
Sulfate		mg/L	12.50	12.48	99	80 - 120	2/6/01

CCV (1)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	75 - 125	2/6/01
n-Octane		mg/Kg	250	207	82	75 - 125	2/6/01

CCV (2)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	308	123	75 - 125	2/6/01
n-Octane		mg/Kg	250	223	89	75 - 125	2/6/01

CCV (3)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	278	111	75 - 125	2/6/01
n-Octane		mg/Kg	250	242	96	75 - 125	2/6/01

ICV (1)

QC Batch: QC08884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	292	116	75 - 125	2/6/01
n-Octane		mg/Kg	250	204	81	75 - 125	2/6/01

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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A010[illegible]

Company Name: BNC ENVIRONMENTAL
Phone #: 715/6860086

Address: (Street, City, Zip) MIDLAND TX.
Fax #:

Contact Person: AARON WILSON

Invoice to: (If different from above) BNC- HOUSTON

Project #: 915-1
Project Name: CHAVEROO STATION

Project Location: CHAVEROO STATION - ROOSEVELT CO. NM
Sampler Signature: [signature]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CL	TPH 8015 (GRO-DRO)	Turn Around Time if different from standard	Hold
164236	KK	1	4oz		X							X		2/3/01	12:15		X														X	X		
37	LL	1	"		X							X		"	12:25		X														X	X		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	2/3/01	2:05 PM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			[signature]	02/03/01	2:10pm

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review [initials]

REMARKS: Need 2/7 if possible

☐ Check if Special Reporting Limits Are Needed

Carrier # Currier

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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CHAIN-OF-CUSTODY AND ANAL[YSIS REQUEST]

LAB Order ID # A0102050

Company Name: BNC ENVIRONMENTAL — Phone #: 915/6860086

Address: (Street, City, Zip) MIDLAND TX — Fax #:

Contact Person: AARON WILSON

Invoice to: (If different from above) BNC - HOUSTON

Project #: 915-1 — Project Name: CHAVEROO STATION

Project Location: CHAVEROO STATION / ROOSEVELT CO NM — Sampler Signature: [signature]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CL	TPH 8015 Gro + DRO				Turn Around Time if different from standard	Hold
225	CD (N/Z) 3'	1	4oz		X								X			2/2/01	4:00 Pm		X														X	X					
26	AA	1	"		X								X			2/3/01	10:35		X														X	X					
27	BB	1	"		X								X			"	10:45		X														X	X					
28	CC	1	"		X								X			"	10:55		X														X	X					
29	DD	1	"		X								X			"	11:10		X														X	X					
30	EE	1	"		X								X			"	11:20		X														X	X					
31	FF	1	"		X								X			"	11:25		X														X	X					
32	GG	1	"		X								X			"	11:45		X														X	X					
33	HH	1	"		X								X			"	11:55		X														X	X					
34	II	1	"		X								X			"	12:05		X														X	X					
35	JJ	1	"		X								X			"	12:10		X														X	X					

Relinquished by: [signature] Date: 2/3/01 Time: 2:05PM — Received by: Date: Time:

Relinquished by: Date: Time: — Received by: Date: Time:

Relinquished by: Date: Time: — Received at Laboratory by: [signature] Date: 02/03/01 Time: 2:10PM

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4°
Log-in Review ms

REMARKS: Need 2/7 if possible
2/12/01

☐ Check If Special Reporting Limits Are Needed

Carrier # Gilly M

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

PHOTOGRAPHS

PHASE I and PHASE II ACTIVITIES

PHOTOGRAPHS

PHASE I ACTIVITIES

Chaveroo Station Prior to Phase I and II Activities

Phase I – Digging Shallow Trenches

Phase I – Digging Shallow Trenches

Phase I - Inspection Trench – Showing Non-Affected Soil

Phase I - Inspection Trench – Showing Non-Affected Soil

PHOTOGRAPHS

PHASE II ACTIVITIES

"C" Excavation

"G" Excavation

Stockpile Soil from "C" Excavation

Stockpiled Soil from "G" Excavation

Windrowing – East to West

Windrowing – South to North

Leveling Windrows

CD(N/2) Area

Final Back Dragged - Construction Affected Area

Final Back Dragged - Construction Affected Area

Disking and Seeding

Covering Seed and Watering