Addendum to Minimum Site Assessment

Fairview Station

1626 N. Riverside Drive

Española, Rio Arriba County, New Mexico

December 23, 2013

Terracon Project No. 66127029.1

Prepared for:

Mr. José C. Roybal c/o Ms. Lucille Roybal, P.E.

Albuquerque, New Mexico

Prepared by:

Terracon Consultants, Inc.

Albuquerque, New Mexico

December 23, 2013

Terracon

Ms. Lucille Roybal, P.E.
2312 Via Seville Court NE
Albuquerque, New Mexico 87104

P: (972) 284-6655

Re: Addendum to Minimum Site Assessment
Fairview Station
1626 N. Riverside Drive
Espanola, Rio Arriba County, New Mexico
Facility I.D. # – 28779
Release I.D. # - 4657
Work Plan I.D. # 16836
Terracon Project No. 66127029.1

Dear Ms. Roybal:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Addendum to Minimum Site Assessment (MSA) report for the above referenced site. This investigation was performed in accordance with Terracon's Work Plan dated August 2, 2013, which was approved by the New Mexico Environment Department Petroleum Storage Tank Bureau on August 23, 2013.

We appreciate the opportunity to perform these services for you. Please contact Mark Hillier at (505) 797-4287 if you have questions regarding the information provided in the report.

Sincerely,
Terracon Consultants, Inc.

Mark R. Hillier, P.G. (TX)
Department Manager

Daniel F. Schneider, C.H.M.M., P.E.
Principal

Attachments

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APPENDICES

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FAIRVIEW STATION
1626 N. RIVERSIDE DRIVE
ESPAÑOLA, RIO ARRIBA COUNTY, NEW MEXICO

Facility I.D. # - 28779 Release I.D. # - 4657 Work Plan I.D. # - 16836

Terracon Project No. 66127029.1

December 23, 2013

EXECUTIVE SUMMARY

The former Fairview Station is located at 1626 N. Riverside Drive, Española, Rio Arriba County, New Mexico (the Site). The Site was initially developed as a gas station in the 1970s. As part of a Minimum Site Assessment (MSA), Terracon Consultants, Inc. (Terracon) subcontracted the installation of soil borings and monitoring wells on January 31 and February 1, 2013. Five soil borings were advanced on the site to depths ranging from 25 feet to 30 feet below grade surface (bgs). Soil boring B-1, advanced in the northeast corner of the UST hold, soil boring B-2, advanced adjacent to the former location of the northeast dispenser, and soil boring B-3, advanced south of the dispenser islands, were converted to permanent groundwater monitoring wells MW-1, MW-2 and MW-3, respectively. The general lithology observed during soil boring advancement consisted of interbedded sand and clay. Non-aqueous phase liquid (NAPL) was detected in the three monitoring wells installed at the site and Terracon recommended the installation of additional monitoring wells to delineate the horizontal extend of groundwater contaminants exceeding Water Quality Control Commission (WQCC) standards.

As part of this Addendum to Minimum Site Assessment (AMSA), Terracon subcontracted the installation of five soil borings and subsequent conversion to permanent groundwater monitoring wells on October 23-24, 2013. One soil boring was advance off site and four soil borings were advanced on the site to depths ranging from 25 feet to 28 feet below grade surface (bgs) by a New Mexico licensed water well driller. Soil boring MW-4 was advanced near the eastern site boundary, soil boring MW-5 was advanced near the southern site boundary, soil boring MW-6 was advanced near the northwest site corner, soil boring MW-7 was advanced near the western site boundary and soil boring MW-8 was advanced north of the site on property occupied by a Dairy Queen restaurant. Subsequent to advancement, the soil borings were converted to permanent, two-inch diameter, groundwater monitoring wells.

The soil and groundwater samples collected from the borings and monitoring well were submitted for laboratory analysis for total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), 1,2-Dibromoethane (EDB), 1,2-Dichloroethane (EDC), polycyclic aromatic hydrocarbons (PAHs) and/or total lead. Based on the results of laboratory analyses, the soils in the vicinity of soil borings MW-5, MW-6, MW-7 and MW-8 appear to have been impacted by a release of unleaded gasoline. Test results indicate concentrations of BTEX, MTBE and/or naphthalene at concentrations exceeding NMED Tier 1 Soil Concentrations Protective of Groundwater dated March 13, 2000. In addition, groundwater samples collected from monitoring wells MW-5, MW-6 and MW-7 exhibited concentrations of BTEX, MTBE, EDC, naphthalene and/or 1-methylnaphthalene exceeding

Water Quality Control Commission standards dated March 13, 2000. Based on the presence of NAPL, Monitoring well MW-8 was not sampled during the AMSA site activities. In lieu of sampling, approximately nine gallons of non-aqueous phase liquid (NAPL) was recovered from this monitoring well.

Based on the results of this AMSA, Terracon recommends the installation of additional off-site monitoring wells to delineate the horizontal extent of groundwater exceeding WQCC standards, interim removal of NAPL from the on- and off-site site monitoring wells, and an evaluation of the affected aquifer to determine the appropriate remedial actions and the recoverability of NAPL.

1.0 CHRONOLOGY OF EVENTS

- 1970s – Site initially developed with the Fairview Station operating two USTs.
- December 1, 1988 – The two original USTs are removed from the site with no releases reported. The Fairview Station is temporarily closed pending installation of replacement USTs.
- August 7, 1989 – Two 8,000-gallon and one 10,000-gallon gasoline UST and four dispensers are installed at the site.
- July 5, 2012 – The three on-site USTs and associated piping and dispensers are removed. Field observations indicate a release has occurred.
- August 6, 2012 – The NMED PSTB issues a release confirmation letter to Mr. José C. Roybal, the site owner.
- November 16, 2012 - Terracon submits a MSA Work Plan to the PSTB.
- December 13, 2012 – NMED PSTB approves Terracon's MSA Work Plan.
- January 31, 2012 – Terracon mobilizes to the site to conduct MSA field activities.
- March 12, 2013 – Terracon submits the MSA to the NMED PSTB.
- June 21, 2013 – Mr. José C. Roybal, the site owner, is notified by the NMED PSTB that the on-site facility is in compliance with all requirements and provisions of regulations adopted by the board under Subsection C of Section 74-4-4 NMSA 1978.
- August 2, 2013 – Terracon submits an AMSA Work Plan to the PSTB.
- August 23, 2013 – NMED PSTB approves Terracon's AMSA Work Plan and assigns Work Plan ID No. 16836.
- October 23, 2013 – Terracon mobilizes to the site to conduct AMSA field activities.
- December 23, 2013 – Terracon submits this AMSA to the NMED PSTB.

2.0 BACKGROUND

2.1 Site Description

Site Name	Fairview Station, Facility ID#: 28779
Site Location/Address	1626 N. Riverside Drive, Española, Rio Arriba County, New Mexico
General Site Description	An approximate 0.5-acre tract of land developed with an approximate 600 square-foot (SF) former gas station building

A topographic map depicting the site location is included as Exhibit 1, and a site diagram is included as Exhibit 3 of Appendix A.

2.2 Description of Historical UST Systems

The original UST system was reportedly removed from the site in December 1988 and releases were not reported at the time of the UST system removal. According to the PSTB database, five USTs have been removed from the site. Based on this information and the documented removal of three USTs in 2012, two USTs are assumed to have originally been in use at the site.

One 10,000-gallon gasoline and two 8,000-gallon gasoline USTs were installed in the north-central portion of the site in August 1989 and were removed in July 2012. Four dispensers associated with the USTs were located southwest of the UST tank basin. It is our understanding, based upon an NMED PSTB Inspection Report for the site dated July 5, 2012, that the USTs were constructed of steel and were equipped with cathodic protection. The associated piping was constructed of fiberglass. The dispensers were connected using steel flexes with cathodic protection. The USTs and piping system were reportedly free of holes or other visible damage at the time of removal.

2.3 Site Geology and Hydrogeology

2.3.1 Local Geology

Based on our review of the *Preliminary Geologic Map of San Juan Pueblo Quadrangle*, prepared by Daniel J. Koning and Kim Manley (August 2003), the site is located on Younger Quaternary Alluvium. A portion of the geologic map is included as Exhibit 2 in Appendix A. This formation consists of sand, silt and mud, silty sand, gravelly sand, and sandy gravel that underlie modern valley floors. Beds are mostly planar to lenticular to channel-shaped, and laminated to very thin- to thick-bedded. Gravel is commonly clast-supported, poorly sorted, rounded to subangular, and generally consists of pebbles and cobbles. Sand is very fine- to very coarse-grained, subangular to subrounded, and poorly to well sorted. Texture and composition of sediment depends on source area drainage. Weakly consolidated to loose, but silt and mud beds may be moderately consolidated. Basal contact not generally exposed, but drilling and seismic data also indicate that this unit overlies older (perhaps Pleistocene-age) sandy gravels deposited by the ancestral Rio Grande.

Based on stratigraphy encountered during on-site drilling, the shallow geology of the site consists of:

- Well-graded sand from the surface to approximately five feet bgs;
- Clay with some silt from approximately five feet bgs to approximately 20 feet bgs;
- Well-graded sand with some gravel from 20 feet bgs to the terminus of the borings at 28 feet bgs.

2.3.2 Local Hydrogeology

Based on Terracon's review of a document titled *General Geology and Ground Water Conditions in the Truchas-Española-Velarde Area of Rio Arriba County, New Mexico*, by R. L. Borton with the OSE (1974), the Rio Grande appears to be a gaining stream in the vicinity of the site with a general gradient direction toward the west in the vicinity of the site. Groundwater elevation data collected during the most recent gauging event conducted on November 26, 2013 from the eight monitoring wells installed on and off site indicated that the direction of groundwater flow at the site is toward the south at approximately 0.003 ft./ft. Based on the relatively flat gradient, the direction of groundwater flow was observed to fluctuate.

The water-bearing stratum at the site appears to Quaternary alluvium consisting of a silty to gravelly sand unit overlain by silt and clay. Based on the low moisture content of overlying soils and static water levels measured subsequent to monitoring well installation, this sand stratum appears to be confined on site.

During monitoring well gauging activities conducted on November 26, 2013, NAPL was detected in Monitoring wells MW-1, MW-2, MW-3, MW-6 and MW-8 at thicknesses ranging from 0.02 feet to six feet. A correction factor of 0.729, commonly accepted as the density of gasoline, was used for the purpose of correcting the static groundwater elevation in these wells. The actual density of the NAPL observed in the wells has not been evaluated and differences in density from the assumed value would affect the calculated groundwater gradient direction. Static groundwater levels (corrected for NAPL thickness) were measured at depths ranging from 14.07 feet bgs to 15.20 feet bgs on November 26, 2013.

2.4 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal and were not intended to be in strict conformance with ASTM E1903-97.

2.5 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products,

or other latent conditions beyond those identified during this AMSA. Subsurface conditions may vary from those encountered at specific borings or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.6 Reliance

This report has been prepared for the exclusive use of Ms. Lucille Roybal, P.E. and the NMED PSTB, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Ms. Lucille Roybal, P.E. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, MSA report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

3.0 SITE INVESTIGATION

3.1 Soil Assessment

Terracon's soil assessment activities were conducted on October 23-24, 2013. Buried utilities were located in accordance with state regulations prior to drilling activities. In addition, well permits were obtained from the Office of the State Engineer (OSE) prior to monitor well installation. In accordance with the approved Work Plan, soil boring MW-4 was advanced near the eastern site boundary, soil boring MW-5 was advanced near the southern site boundary, soil boring MW-6 was advanced near the northwest site corner, soil boring MW-7 was advanced near the western site boundary and soil boring MW-8 was advanced north of the site on property occupied by a Dairy Queen restaurant. Exhibit 3 in Appendix A is a site diagram that indicates the approximate locations of the soil borings in relation to the pertinent structures and general site boundaries.

Drilling services were performed by a State of New Mexico licensed well driller using a truck-mounted hollow stem auger (HAS) rig under the supervision of a Terracon field environmental professional. Soil samples were collected using five-foot core barrels. Drilling equipment was cleaned using an Alconox® wash and potable water rinse prior to beginning the project and before beginning each soil boring. Sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Soil samples were collected continuously and observed to document soil lithology, color, moisture content and sensory evidence of environmental impact. The soil samples were field-

screened using a photoionization detector (PID) to indicate the presence of volatile organic compounds (VOCs).

The general soil lithology encountered during sample collection consisted of the following:

- Well-graded sand from the surface to approximately five feet bgs;
- Silty clay from approximately five feet bgs to approximately 20 feet bgs;
- Well-graded sand with some gravel from 20 feet bgs to the termini of the borings at 28 feet bgs.

Detailed lithologic descriptions are presented on the soil boring logs included in Appendix B. Cross-sections depicting the soils encountered at the site are included as Exhibit 4 and Exhibit 5 in Appendix A.

3.2 Extent of Soil Contamination

Terracon's soil sampling program involved submitting one soil sample from each soil boring for laboratory analysis of TPH using EPA SW-846 method #8015B, and BTEX, MTBE, EDB and EDC using EPA SW-846 method #8260B. The soil samples were preserved in the field using methanol kits supplied by the analytical laboratory. Based on the results of TPH analyses, the soil sample collected from soil boring MW-7, exhibiting the highest gasoline range organics (GRO) and diesel range organics (GRO) TPH results, was additionally analyzed for PAHs using EPA SW-846 method #8270C and for lead using EPA SW-846 method #6010B. The soil samples were generally collected from the zone exhibiting the highest PID reading and/or signs of impact. Soil sample intervals for each boring are presented in the table of soil sample analytical results (Table 1) in Appendix C and on the lithologic boring logs included in Appendix B.

The soil samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis.

The soil samples collected from soil borings MW-5, MW-6, MW-7 and MW-8 exhibited concentrations of BTEX exceeding the Tier 1 Soil Concentrations Protective of Groundwater (SCPGs). In addition, the soil sample collected from soil boring MW-8 exhibited an MTBE concentration exceeding the applicable Tier 1 SCPG and the soil sample collected from soil boring MW-7 exhibited a naphthalene concentration exceeding the applicable Tier 1 SCPG. The laboratory reporting limits for benzene, MTBE, EDB and EDC were above the applicable Tier 1 SCPGs in each of the samples analyzed. Soil sample laboratory results are summarized in Table 1 included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E. A soil concentration map is provided as Exhibit 6 in Appendix A.

Based on the Tier 1 SCPG exceedances for the soil samples collected from soil borings MW-5, MW-6, MW-7 and MW-8, the extent of soil contamination exceeding Tier 1 SCPGs has not been delineated to the north, south and west of the source area.

Although the soil sample collected from monitoring well MW-4 did not exhibit concentrations of BTEX, MTBE, EDB or EDC above the Tier 1 SCPGs, this sample exhibited a TPH DRO concentration of 33 mg/kg. Based on the impact to the soils in this soil boring, a sample for laboratory analysis of soil bulk density, soil moisture content, effective porosity and fraction organic carbon content was not collected as part of this investigation.

3.3 Groundwater Assessment

Subsequent to advancement, soil borings MW-4, MW-5, MW-6, MW-7 and MW-8 were converted to permanent two-inch diameter monitoring wells. The monitoring wells were completed using the following methodology:

- Installation of 15 feet of 2-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap;
- Installation of 13 feet of 2-inch diameter, threaded, flush joint PVC riser pipe to the surface;
- Addition of a pre-sieved 10/20-grade annular silica sand pack from the bottom of the boring to approximately 2 feet above the top of the well screen;
- Addition of 2 feet of hydrated bentonite seal above the sand pack filter zone;
- Addition of a slurry mixture of powdered bentonite and Portland cement to the near surface;
- Installation of an 8-inch diameter, circular, bolt-down, steel, monitoring well cover with locking well cap inset in a flush-mount, concrete well pad.

A New Mexico licensed land surveyor was contracted to survey the top of casing of the five monitoring wells horizontally and vertically. The horizontal data was provided in New Mexico State Plane coordinates to an accuracy of 0.001 foot and the vertical data was provided in elevation above mean sea level to an accuracy of 0.01 foot. The west side of the top of casings was surveyed at each well location. The surveyor's report is provided in Appendix D. Monitoring well construction details are presented on the soil boring logs for the monitoring wells included in Appendix B. The depth to groundwater measurements and NAPL thickness data are presented in Table 3 in Appendix C.

Subsequent to installation, each monitoring well was gauged with an interface meter to evaluate the presence of NAPL. NAPL was identified in monitoring well MW-8 and based on the presence of NAPL; this monitoring well was not developed or sampled. Monitoring wells MW-4, MW-5, MW-6 and MW-7 were developed by surging and removing groundwater with a new, disposable, polyethylene bailer until the groundwater was relatively free of fine-grained sediment or until the wells contained less than one foot of groundwater. Approximately 12

gallons of groundwater were removed from monitoring well MW-4, approximately 3.5-gallons of groundwater were removed from monitoring well MW-5, approximately 2.5 gallons of groundwater were removed from monitoring well MW-6 and approximately 20 gallons of groundwater were removed from monitoring well MW-7 during development activities. This development water was discharged in an impervious surface on the site and allowed to evaporate in accordance with NMED PSTB guidance.

On November 29, 2013, monitoring wells MW-4, MW-5, MW-6 and MW-7 were purged by removing three well volumes of water with a new disposable bailer prior to sampling. Subsequent to purging and recharge, groundwater samples were collected from each of these monitoring wells using a new disposable polyethylene bailer. The groundwater samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for analysis.

3.4 Extent of Groundwater Contamination

Based on the results of laboratory analyses, the groundwater sample collected from monitoring well MW-4 did not exhibit concentrations of BTEX, MTBE, EDB or EDC above New Mexico Water Quality Control Commission (WQCC) standards. However, the groundwater samples collected from monitoring wells MW-5, MW-6 and MW-7 exhibited concentrations of BTEX, MTBE, EDC, naphthalene and 1-methylnaphthalene exceeding New Mexico Water Quality Control Commission (WQCC) standards. Groundwater sample laboratory results are summarized in Table 2 in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E. A groundwater concentration map is provided as Exhibit 7 in Appendix A.

Based on depth to groundwater data and NAPL thickness data collected on November 26, 2013 from the off-site monitoring well and the seven on-site monitoring wells and the top of casing elevation data provided by the land surveyor, the groundwater flow direction at the site was calculated to flow toward the south at approximately 0.003 ft./ft. A correction factor of 0.729, commonly accepted as the density of gasoline, was used for the purpose of correcting the static groundwater elevation in these wells. The actual density of the NAPL observed in the wells has not been evaluated and differences in density from the assumed value would affect the calculated groundwater gradient direction. Static groundwater levels (corrected for NAPL thickness) were measured at depths ranging from 14.07 feet bgs to 15.20 feet bgs on November 26, 2013. A groundwater gradient map is provided as Exhibit 8 in Appendix A.

Based on the WQCC standard exceedances in the groundwater sample collected from monitoring wells MW-5, MW-6 and MW-7 and the presence of NAPL in monitoring well MW-8, the extent of groundwater contamination exceeding WQCC standards has not been defined to the north, south and west of the source area.

3.5 Private Water Supply Well Sampling

Terracon attempted to locate private water supply wells RG01466 S and RG 36345. However, the residents of the homes nearby the reported location were either not at home or did not have knowledge of the locations of the wells. Based on the inability to locate the wells, these two private water supply wells were not sampled.

4.0 AMENDMENTS / UNANTICIPATED SITE CONDITIONS

Unanticipated site conditions were not encountered during Terracon's assessment activities.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Five on-site soil borings (MW-4, MW-5, MW-6 and MW-7) and one off-site soil boring (MW-8) were advanced at the Fairview Station facility located at 1626 N. Riverside Drive in Española, Rio Arriba County, New Mexico. Subsequent to completion, the five soil borings were converted to permanent two-inch diameter monitoring wells.

Based on the results of Terracon's assessment activities, Terracon concludes the following:

- The on-site soils in the vicinity of soil borings MW-5, MW-6, MW-7 and MW-8 have been impacted by a release of unleaded gasoline and exhibit concentrations of BTEX, MTBE and/or naphthalene at concentrations exceeding Tier 1 SCPGs.
- The depth to groundwater at the site ranged from 14.07 feet bgs to 15.20 feet bgs on November 26, 2013 with a gradient toward the south at approximately 0.003 ft./ft.
- Groundwater samples collected from monitoring wells MW-5, MW-6 and MW-7 exhibited concentrations of BTEX, MTBE, EDC, naphthalene and 1-methylnaphthalene exceeding WQCC standards.
- Approximately 4.25 feet of NAPL was encountered in monitoring well MW-8 during gauging activities conducted on November 26, 2013.

Based on the results of this MSA, Terracon recommends the following:

- The installation of additional monitoring wells to delineate the horizontal and vertical extent of groundwater exhibiting WQCC standard exceedances
- Interim removal of NAPL from the on-site monitoring wells
- An evaluation of the affected aquifer for the recoverability of NAPL

6.0 STATEMENT OF FAMILIARITY

This report was prepared by Mr. Mark R. Hillier, P.G. and was reviewed by Mr. Daniel F. Schneider, C.H.M.M, P.E. whom is personally familiar with the information submitted in this report and the attached documents and attests that it is true and complete.

Prepared by:

Mark R. Hillier, P.G. (TX #4454)

Signature

Affiliation: Terracon Consultants, Inc.

Title: Department Manager

Date: March 8, 2013

Supervised by:

Name: Daniel F. Schneider, C.H.M.M., P.E.

Signature:

Affiliation: Terracon Consultants, Inc.

Title: Senior Associate

Date: March 8, 2013

7.0 REFERENCES

NMED PSTB Regulations, 20.5 NMAC, 2013

All Storage Tank List, NMED PSTB, 2013

Inspection Report, NMED PSTB, July 5, 2012

USGS Topographic Map, San Juan Pueblo, New Mexico Quadrangle, 1977

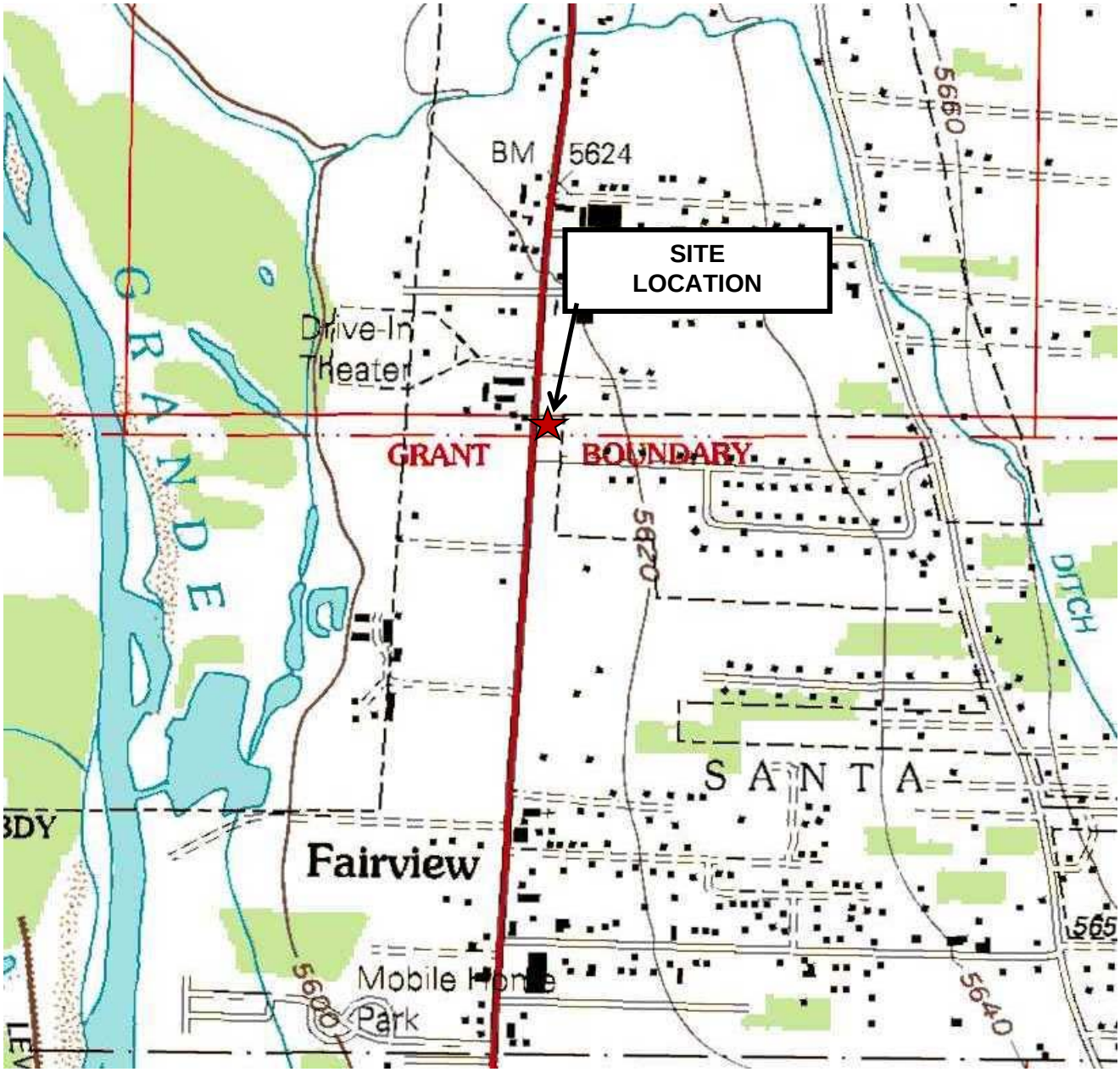
General Geology and Ground Water Conditions in the Truchas-Espanola-Velarde area of Rio Arriba County, New Mexico, R. L. Borton, 1974

Preliminary Geologic Map of San Juan Pueblo Quadrangle, Daniel J. Koning and Kim Manley, August 2003

New Mexico Office of the State Engineer Water Rights Reporting System database, 2013

APPENDIX A

Figures

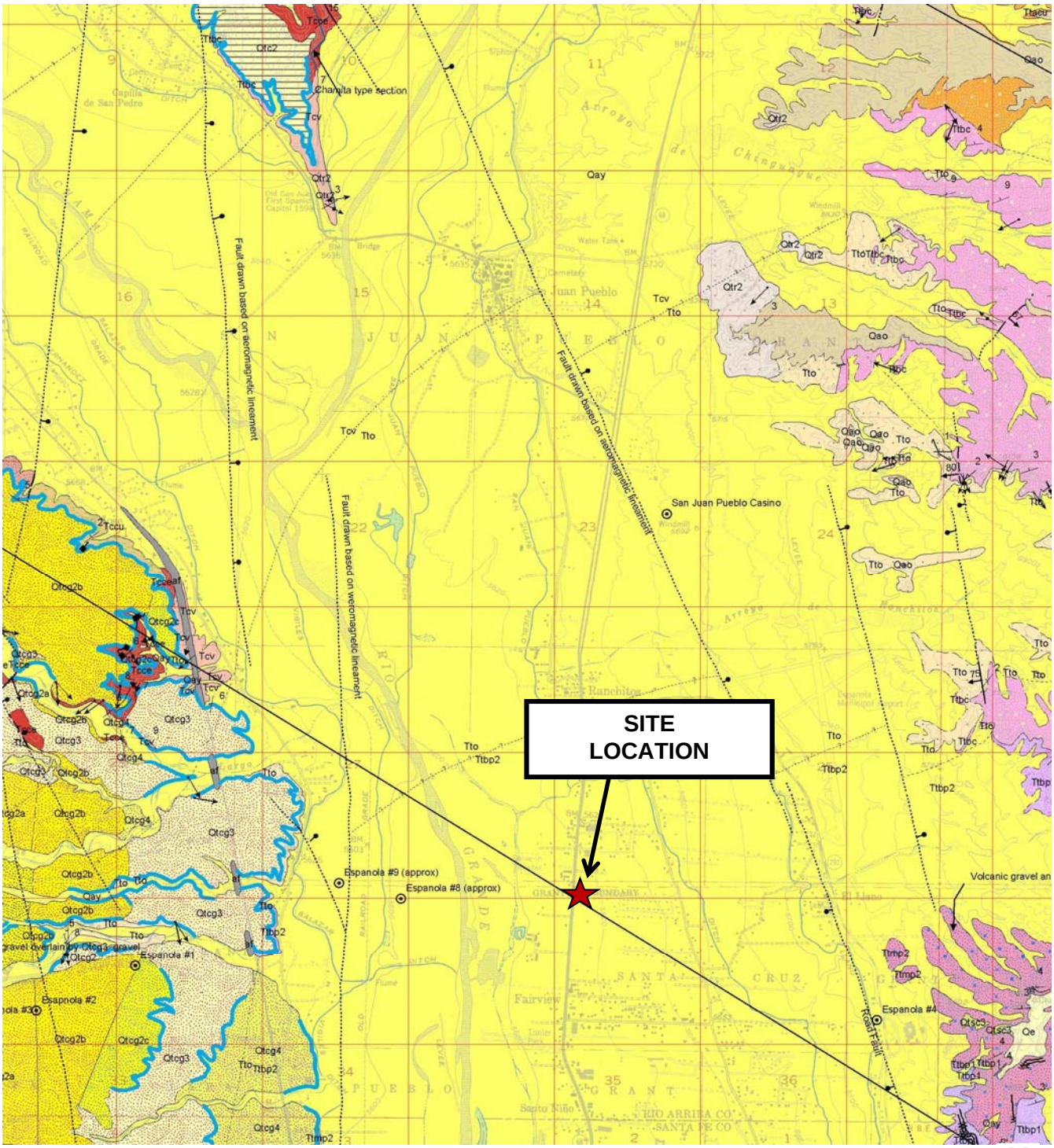


N

USGS San Juan Pueblo, NM published 1977 (1:24,000)

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: MRH	Project No. 66127029.1	Terracon Consulting Engineers & Scientists	SITE TOPOGRAPHIC MAP
Drawn by: JAS	Scale: 1 ≅ 1,000'	4905 Hawkins, NE Albuquerque, New Mexico 87109	FAIRVIEW STATION 1626 NORTH RIVERSIDE DRIVE ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO
Checked by: MRH	File Name:	PH. (505) 797-4287 FAX. (505) 797-4288	EXHIBIT 1
Approved by: MRH	Date: 3/6/13		



Map Source: Preliminary Geologic Map of the San Juan Pueblo Quadrangle, May 2003

Project Manager: MRH	Project No. 66127029.1	Terracon Consulting Engineers & Scientists	SITE GEOLOGIC MAP	EXHIBIT
Drawn by: JAS	Scale: 1 ≅ 3,400'	4905 Hawkins, NE Albuquerque, New Mexico 87109	FAIRVIEW STATION 1626 NORTH RIVERSIDE DRIVE ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO	2
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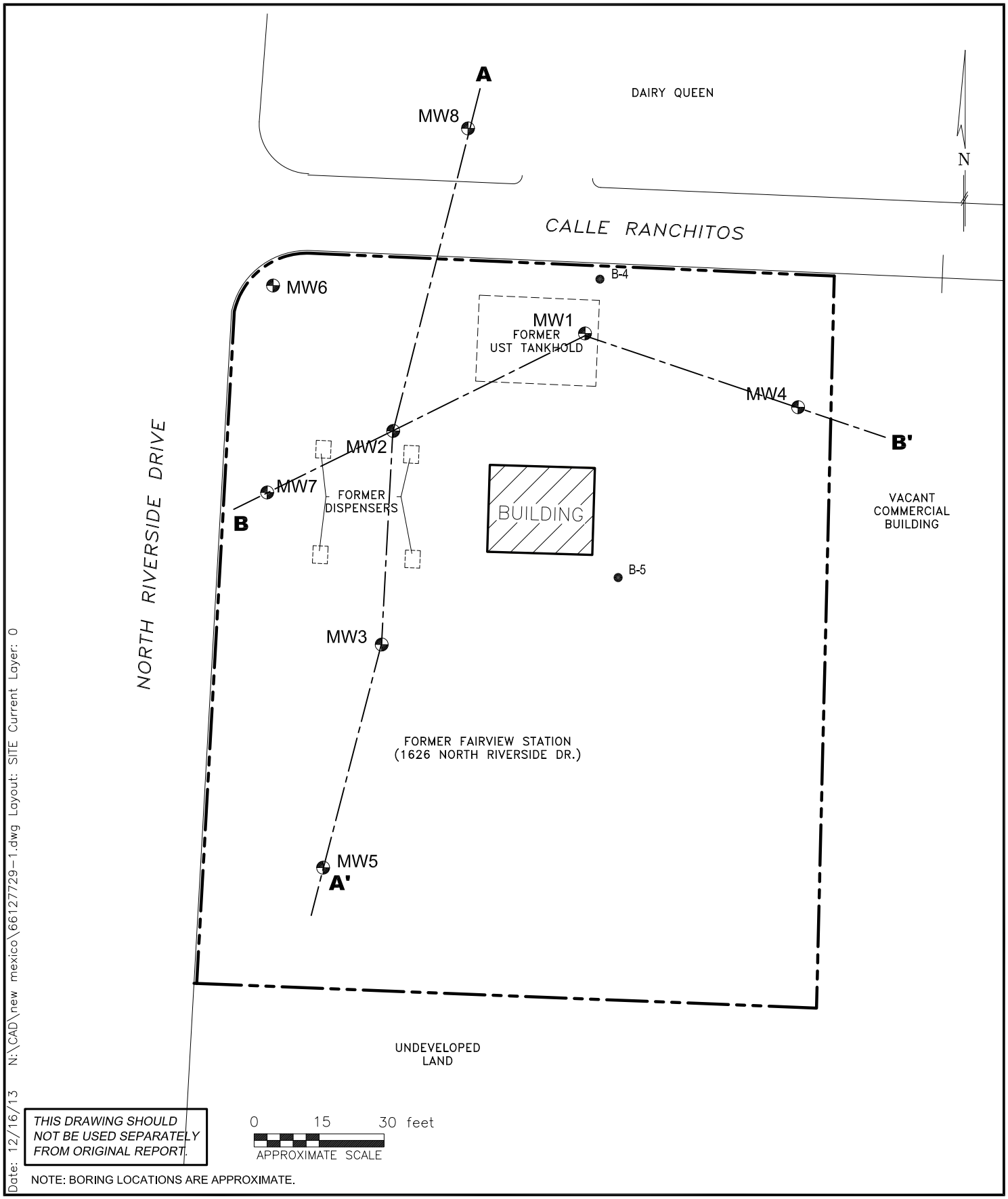
Approved by: MRH	Date: 3/6/13			



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: BORING LOCATIONS ARE APPROXIMATE.

Date: 12/16/13 N:\CAD\new mexico\66127729-1.dwg Layout: SITE Current Layer: 0

Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH

Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/16/13

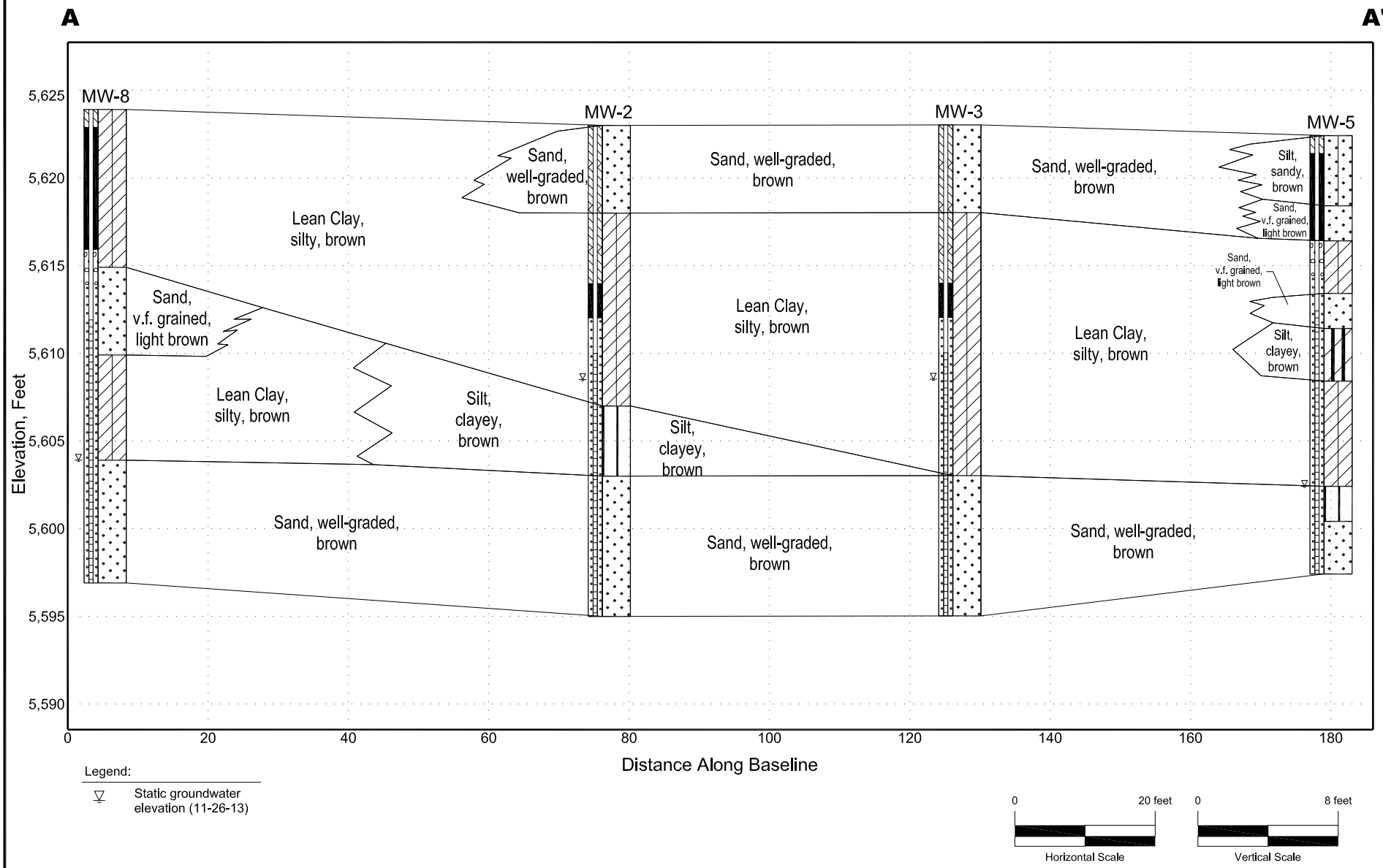
Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

SITE DIAGRAM

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 3

Date: 12/17/13 N:\CAD\new mexico\66127029-1.dwg Layout: AA' Current Layer: 0



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: ALL BORING LOCATIONS ARE APPROXIMATE.

Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH

Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/17/13

Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
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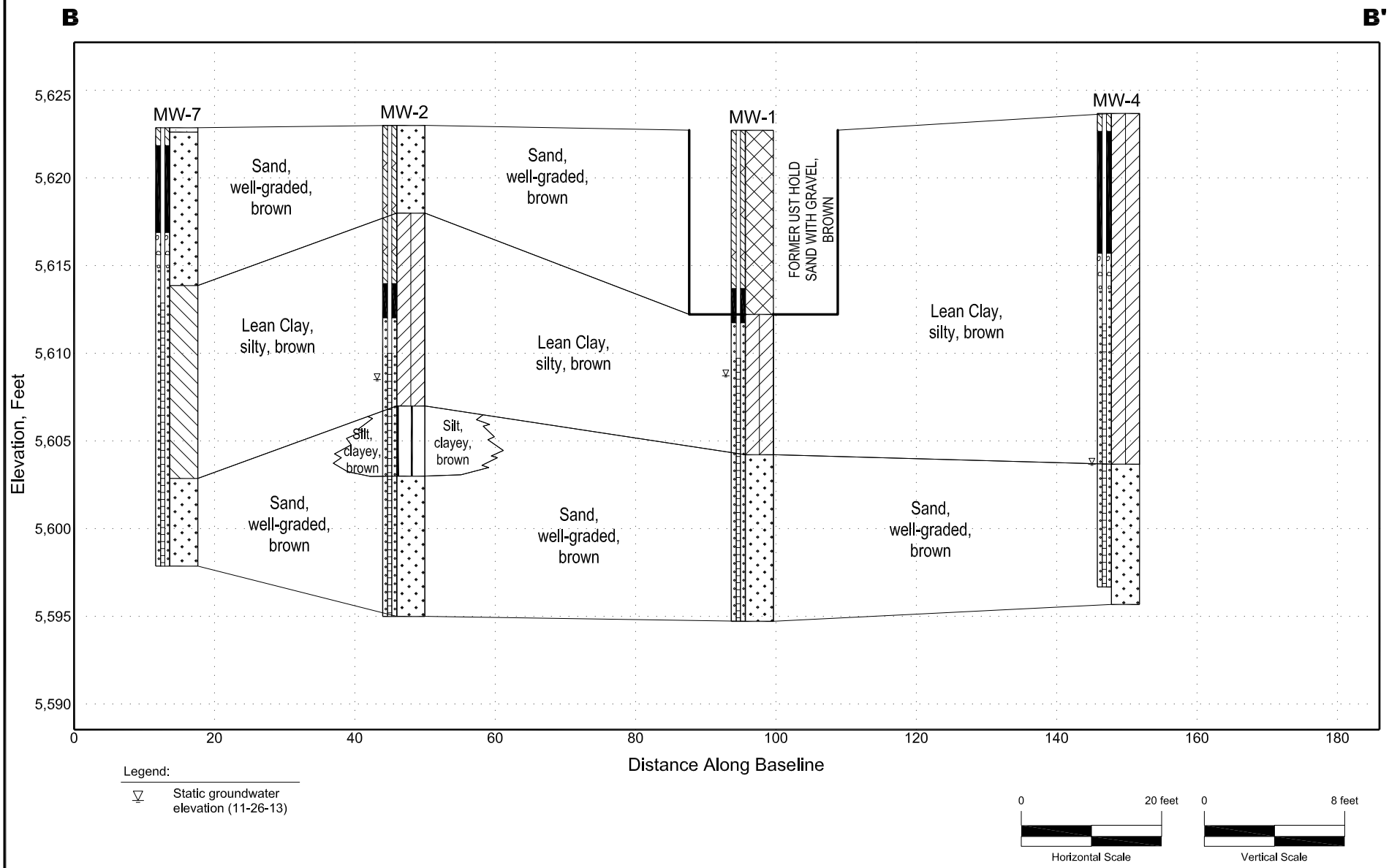
SOIL CROSS SECTION

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 4

Date: 12/17/13 N:\CAD\new mexico\66127029-1.dwg Layout: BB' Current Layer: 0



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: ALL BORING LOCATIONS ARE APPROXIMATE.

Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH

Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/17/13

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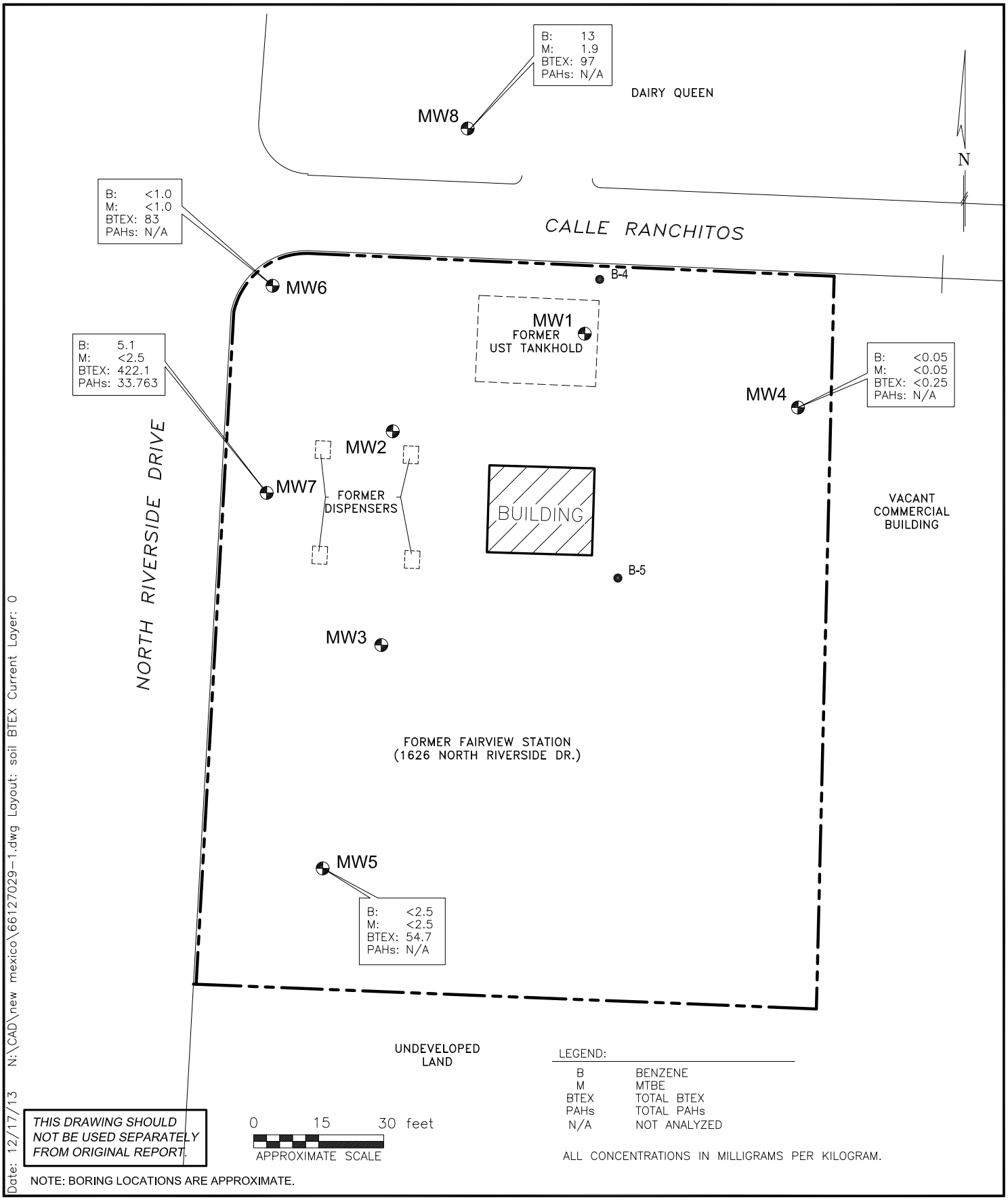
SOIL CROSS SECTION

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 5



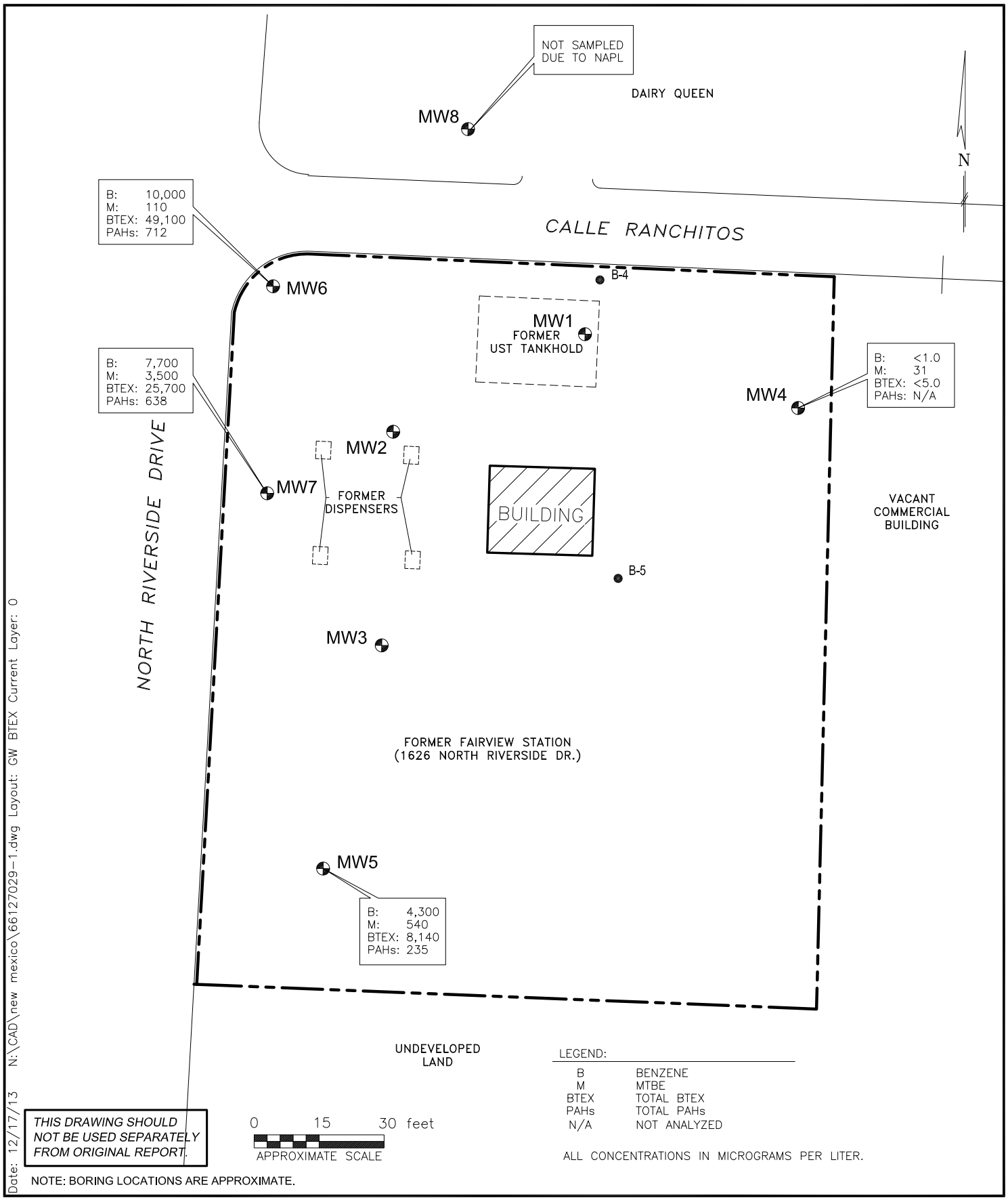
Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH
Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/17/13

Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

SOIL CONCENTRATION MAP

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 6



Date: 12/17/13 N:\CAD\new mexico\66127029-1.dwg Layout: GW BTEX Current Layer: 0

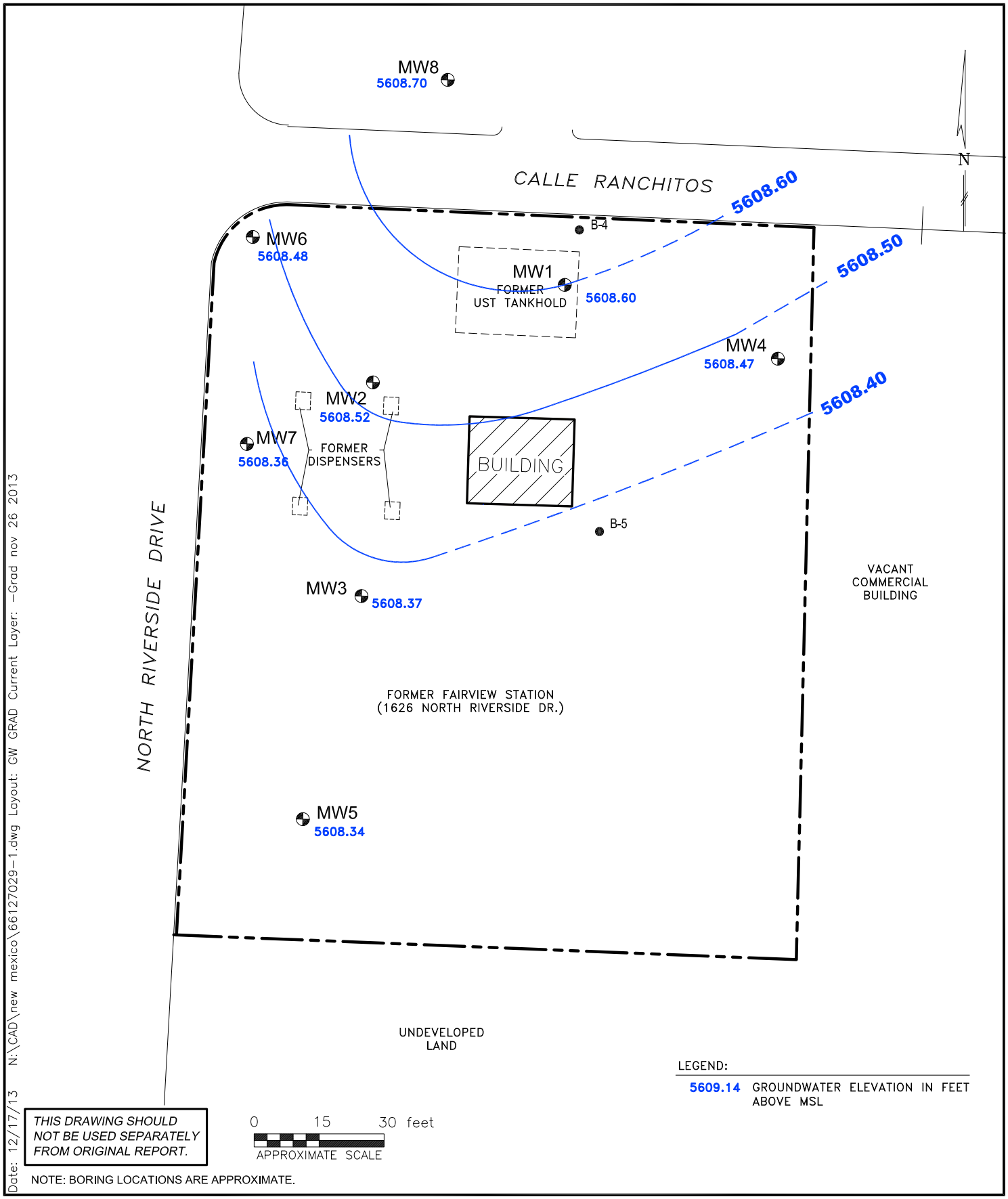
Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH
Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/17/13

Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

GROUNDWATER CONCENTRATION MAP

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 7



Date: 12/17/13 N:\CAD\new mexico\66127029-1.dwg Layout: GW GRAD Current Layer: -Grad nov 26 2013

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: BORING LOCATIONS ARE APPROXIMATE.

Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH
Project No.	66127029.1
Scale:	AS SHOWN
Date:	12/17/13

Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

GROUNDWATER GRADIENT MAP 11-26-13

FAIRVIEW STATION
1626 NORTH RIVERSIDE DRIVE
ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO

EXHIBIT 8

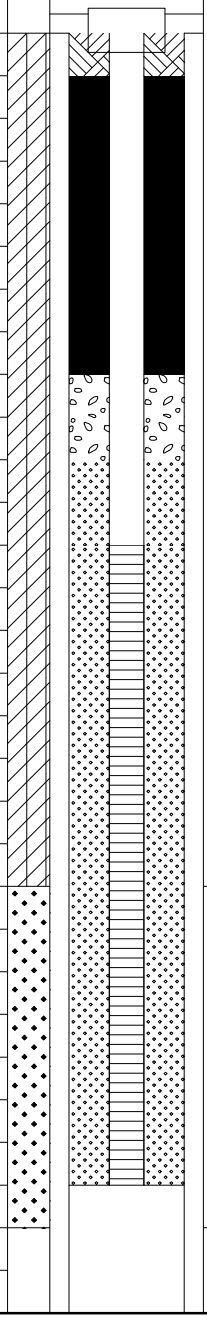
APPENDIX B

Boring Logs and Well Permits

SOIL BORING / MONITORING WELL LOG

PROJECT: Fairview Station
PROJECT NUMBER: 66137029.1
CLIENT:
BORING / WELL NUMBER: MW-4
TOTAL DEPTH: 28.0'
TOP OF CASING:
FIELD PERSONNEL: M. Hillier

DRILLING COMPANY: EDI
DRILLER: C. Ortiz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER:
SCREEN: Diam. 2" Length 15' Slot Size 0.010"
CASING: Diam. 2" Length 12' Type PVC
DATE DRILLED: 10-23-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0	0				LEAN CLAY, with silt, brown, moist, no hydrocarbon odor
5	38.8				
	21.1				
10	82.9				
	NR				- mild hydrocarbon odor at 10'
	NR		12.0		
15	NR		15.0		
	NR				
	NR				
20 ▽	NR			20.0	WELL GRADED SAND, with gravel, wet, strong hydrocarbon odor
	NR				
25	NR				
	NR			28.0	
30					BOTTOM OF BORING at 28.0 FEET

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

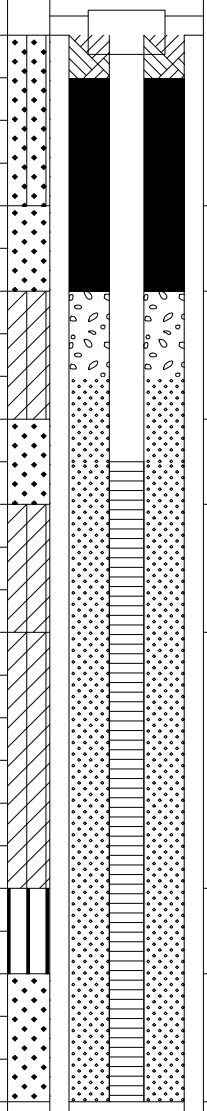
Terracon

MWL30 66137029-1.GPJ 11/12/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Fairview Station
PROJECT NUMBER: 66137029.1
CLIENT:
BORING / WELL NUMBER: MW-5
TOTAL DEPTH: 25.0'
TOP OF CASING:
FIELD PERSONNEL: M. Hillier

DRILLING COMPANY: EDI
DRILLER: C. Ortiz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER:
SCREEN: Diam. 2" Length 15' Slot Size 0.010"
CASING: Diam. 2" Length 10' Type PVC
DATE DRILLED: 10-23-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0			4.0	SILT, sandy, brown, moist, no hydrocarbon odor
5	0			6.0	SAND, very fine grained, light brown, moist, no hydrocarbon odor
	0			9.0	LEAN CLAY, silty, light brown, moist, no hydrocarbon odor
10	0			11.0	SAND, very fine grained, light brown, moist, no hydrocarbon odor
	0			14.0	SILT, clayey, wet, no hydrocarbon odor
15	>4000		15.0		LEAN CLAY, silty, brown, moist, strong hydrocarbon odor
	259		18.0		
20 ▽	43.6			20.0	
				22.0	SILT, stained dark gray, wet, mild hydrocarbon odor
	24.7				WELL GRADED SAND, with gravel, stained dark gray, wet, mild hydrocarbon odor
25				25.0	
					BOTTOM OF BORING at 25.0 FEET
30					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

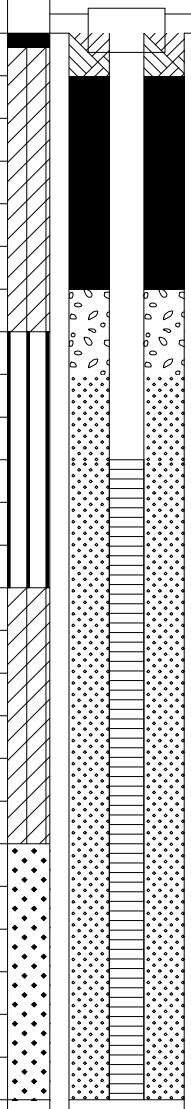
Terracon

MWL30 66137029-1.GPJ 11/12/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Fairview Station
PROJECT NUMBER: 66137029.1
CLIENT:
BORING / WELL NUMBER: MW-6
TOTAL DEPTH: 25.0'
TOP OF CASING:
FIELD PERSONNEL: M. Hillier

DRILLING COMPANY: EDI
DRILLER: C. Ortiz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER:
SCREEN: Diam. 2" Length 15' Slot Size 0.010"
CASING: Diam. 2" Length 10' Type PVC
DATE DRILLED: 10-23-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0				0.3	4" ASPHALT
	0				LEAN CLAY, silty, brown, moist, no hydrocarbon odor
5	0				
	25.7			7.0	
	131				SILT, dark brown, wet, hydrocarbon odor
10	>4000				
	>4000		12.0	13.0	
	>4000		15.0		LEAN CLAY, silty, mottled brown and white, moist, strong hydrocarbon odor
15	1960				
	720			19.0	
20	294				WELL GRADED SAND, with gravel, stained black, wet, strong hydrocarbon odor
25				25.0	
					BOTTOM OF BORING at 25.0 FEET
30					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

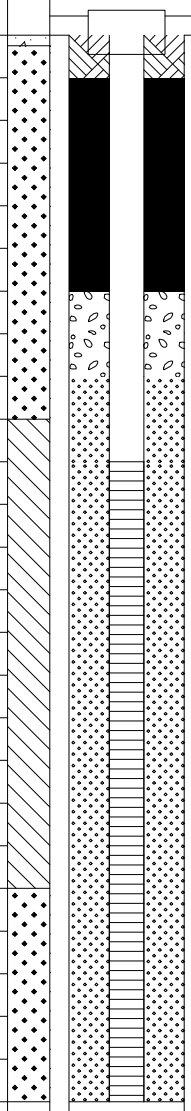
Terracon

MWL30 66137029-1.GPJ 11/12/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Fairview Station
PROJECT NUMBER: 66137029.1
CLIENT:
BORING / WELL NUMBER: MW-7
TOTAL DEPTH: 25.0'
TOP OF CASING:
FIELD PERSONNEL: M. Hillier

DRILLING COMPANY: EDI
DRILLER: C. Ortiz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER:
SCREEN: Diam. 2" Length 15' Slot Size 0.010"
CASING: Diam. 2" Length 10' Type PVC
DATE DRILLED: 10-24-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0				0.3	3" CONCRETE
	232				WELL GRADED SAND, with gravel, brown, moist, hydrocarbon odor
5	236				- no gravel
	2320				
	3990			9.0	
10	>4000		10.0		LEAN CLAY, silty, brown, moist, hydrocarbon odor
	>4000		13.0		
15	>4000				
	1530				
	389			20.0	
20	261				WELL GRADED SAND, with gravel, brown, wet, hydrocarbon odor
25				25.0	BOTTOM OF BORING at 25.0 FEET
30					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

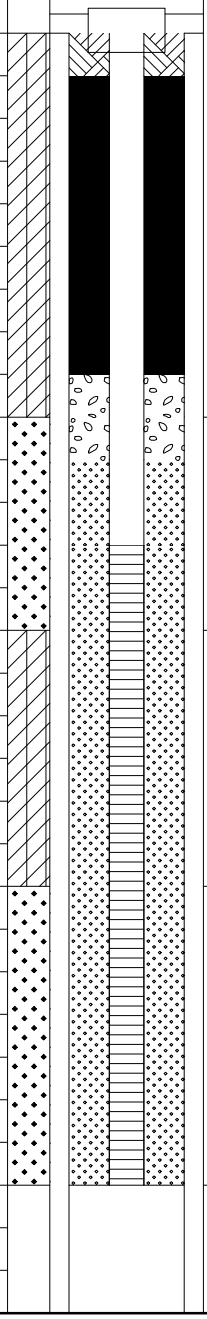
Terracon

MWL30 66137029-1.GPJ 11/12/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Fairview Station
PROJECT NUMBER: 66137029.1
CLIENT:
BORING / WELL NUMBER: MW-8
TOTAL DEPTH: 27.0'
TOP OF CASING:
FIELD PERSONNEL: M. Hillier

DRILLING COMPANY: EDI
DRILLER: C. Ortiz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER:
SCREEN: Diam. 2" Length 15' Slot Size 0.010"
CASING: Diam. 2" Length 12' Type PVC
DATE DRILLED: 10-24-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	1.8				LEAN CLAY, silty, brown, moist, mild hydrocarbon odor
5	35.8				
	24.5				
	103			9.0	
10	92.5				SAND, very fine grained, light brown, moist, mild hydrocarbon odor
	1560			14.0	
15	3280				LEAN CLAY, silty, mottled brown and white, moist, hydrocarbon odor
	>4000		17.0		
	3136				
20 ▽			20.0	20.0	
	211				WELL GRADED SAND, with gravel, brown, wet, strong hydrocarbon odor
25	132				
				27.0	
30					BOTTOM OF BORING at 27.0 FEET

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

MWL30 66137029-1.GPJ 11/12/13

MH

Scott A. Verhines, P.E.
State Engineer

Santa Fe Office
PO BOX 25102
SANTA FE, NM 87504-5102

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 535169
File Nbr: RG 93769

Oct. 07, 2013

JOSE ROYBAL
2312 VIA SEVILLE CT NW
ALBUQUERQUE, NM 87104

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 10/07/2014, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 10/07/2014.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Ken Churan
(505)827-6120

Enclosure

explore

CC: MARK MILLER, TERRACON

Scott A. Verhines, P.E.
State Engineer

Santa Fe Office
PO BOX 25102
SANTA FE, NM 87504-5102

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 535169
File Nbr: RG 93769

Oct. 07, 2013

LUCILLE ROYBAL
2312 VIA SEVILLE CT. NW
ALBUQUERQUE, NM 87104

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 10/07/2014, unless a permit to use the water is acquired from this office.

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Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Ken Churan
(505)827-6120

Enclosure

explore

CC: MARK HILLIER, TERRACON

HQ-57777
#25

File No. RG-93769

NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal
☐ Exploratory	☐ Construction Site De-Watering	☐ Other (Describe):
☒ Monitoring	☐ Mineral De-Watering	

A separate permit will be required to apply water to beneficial use.

☐ Temporary Request - Requested Start Date: Requested End Date:

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Jose C. Roybal	Name:
Contact or Agent: check here if Agent ☑ Lucille Roybal	Contact or Agent: check here if Agent ☐
Mailing Address: 2312 Via Seville Ct. NW	Mailing Address:
City: Albuquerque	City:
State: New Mexico Zip Code: 87104	State: Zip Code:
Phone: 505-980-4678 ☐ Home ☑ Cell Phone (Work): 505-284-6655	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): lmroybal@sandia.gov	E-mail (optional):

2013 SEP 27 AM 10:24
OFFICE OF THE STATE ENGINEER SANTA FE, NEW MEXICO

2013 SEP 25 AM 8:20
OFFICE OF THE STATE ENGINEER ALBUQUERQUE, NEW MEXICO

FOR OSE INTERNAL USE — Application for Permit, Form wr-07, Rev 8/25/11

File Number: RG-93769	Trn Number: 535169
Trans Description (optional):	
Sub-Basin:	
PCW/LOG Due Date:	

2. **WELL(S)** Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84)

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

☑ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Latitude:	Y or Northing or Longitude:	Optional: **Complete boxes labeled "Other" below with PLSS (Public Land Survey System, i.e. Quarters, Section, Township, Range); Hydrographic Survey Map & Tract; Lot, Block & Subdivision; OR Land Grant Name if known.**
POD 4 MW-4	36° 0' 59.11"	106° 3' 51.05"	
POD 5 MW-5	36° 0' 59.87"	106° 3' 51.26"	
POD 6 MW-6	36° 0' 59.94"	106° 3' 49.79"	
POD 7 MW-7	36° 1' 0.34"	106° 3' 51.49"	
POD 8 MW-8	36° 1' 0.70"	106° 3' 50.65"	

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ☑ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other: The wells will be located on the east side of South Riverside Dr. at Calle Ranchitos in Espanola, NM

Well is on land owned by: Jose C. Reybal and Drive-In Queen of Espanola, Inc.

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. **Attached?** ☐ Yes ☑ No
If yes, how many_____ All 5 wells will have the same construction

Approximate depth of well (feet): 30	Outside diameter of well casing (inches): 2
Driller Name: Enviro-Drill	Driller License Number: WD-1186

3. **ADDITIONAL STATEMENTS OR EXPLANATIONS**

These 5 wells will be additional PODs for RG-93769

OFFICE OF THE STATE ENGINEER
SANTA FE, NEW MEXICO
2013 SEP 27 AM 10:24

2013 SEP 25 AM 8:20
OFFICE OF THE STATE ENGINEER
ALBUQUERQUE, NEW MEXICO

FOR OSE INTERNAL USE — Application for Permit, Form wr-07

File Number: RG-93769	Trn Number: 535169

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ☐ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Geo-Thermal:** ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)). Lucille Roybal, agent for Jose C. Roybal
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 7 day of OCTOBER 20 13, for the State Engineer,

SCOTT A. VERSES P.E., State Engineer

By: Signature KEN CHURCH Print

Title: WATER RESOURCES SPECIALIST

Print

2013 SEP 27 AM 10:24

2013 SEP 25 AM 8:

FOR OSE INTERNAL USE Application for Permit, Form wr-07

File Number: RG 93769 Trn Number: 535169

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

4 No water shall be appropriated and beneficially used under this permit.

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.

C1 A complete and properly executed Well Record on the form provided by the State Engineer shall be filed not later than twenty (20) days after completion of the well.
Test data shall be filed not later than twenty (20) days after completion of the test(s).

G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.

LOG The Point of Diversion RG 93769 POD4 must be completed and the Well Log filed on or before 10/07/2014.

LOG The Point of Diversion RG 93769 POD5 must be completed and the Well Log filed on or before 10/07/2014.

LOG The Point of Diversion RG 93769 POD6 must be completed and the Well Log filed on or before 10/07/2014.

LOG The Point of Diversion RG 93769 POD7 must be completed and the Well Log filed on or before 10/07/2014.

LOG The Point of Diversion RG 93769 POD8 must be completed and the Well Log filed on or before 10/07/2014.

Trn Desc: RG 93769

File Number: RG 93769
Trn Number: 535169

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 09/27/2013	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 07 day of Oct A.D., 2013

Scott A. Verhines, P.E., State Engineer

By: _____
Ken Churan

STATE ENGINEER · STATE OF NEW MEXICO · SEAL OF THE STATE OF NEW MEXICO · GREAT SEAL · 1912 · CRESCIT EUNDO

Trn Desc: RG 93769

File Number: RG 93769
Trn Number: 535169

APPENDIX C

Summary Tables
Table 1 – Soil Sample Analytical Results
Table 2 – Groundwater Sample Analytical Results
Table 3 - NAPL Thickness and Groundwater Elevations

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS - BTEX/MTBE/EDB/EDC (8260B), PAHs (8270C), Lead (6010B) and TPH (8015B)

Fairview Station - Facility # 28779, Relese ID# 4657

1626 N. Riverside Drive, Espanola, New Mexico

Terracon Project No. 66127029

Sample I.D.	Sample Depth (ft)	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	EDB (mg/Kg)	EDC (mg/Kg)	PAHs[1] (mg/Kg)	Lead (mg/Kg)	TPH (TX1005 Rev. 3) (mg/Kg)		
												MRO	DRO	GRO
B-1/MW-1	15'	01/31/13	27	84	44	170	<2.5	<2.5	<2.5	NA[2]	NA	<48	350	1,800
B-2/MW-2	12.5'	01/31/13	6.0	19	12	51	2.5	<1.0	<1.0	NA	NA	<50	64	540
B-3/MW-3	17.5	02/01/13	21	48	18	77	1.6	<1.0	<1.0	NA	NA	<49	85	970
B-4	22.5	02/01/13	13	77	54	240	2.0	<1.0	<1.0	Naphthalene - 13 1-Methylnaphthalene - 9.2 2-Methylnaphthalene - 18 Fluorene - 0.079 Phenanthrene - 0.11 Fluoranthene - 0.026	2.8	<50	830	2,300
B-5	7.5'	02/01/13	<0.050	<0.050	<0.050	<0.10	<0.050	<0.050	<0.050	NA	NA	<48	<9.7	<5.0
MW-4	7.5' - 10'	10/23/13	<0.050	<0.050	<0.050	<0.10	<0.050	<0.050	<0.050	NA	NA	<50	33	<10
MW-5	15'-17.5'	10/23/13	<2.5	4.7	10	40	<2.5	<2.5	<2.5	NA	NA	<50	210	350
MW-6	12.5'-15'	10/23/13	<1.0	8.0	16	59	<1.0	<1.0	<1.0	NA	NA	<51	380	720
MW-7	10-12.5	10/24/13	5.1	76	61	280	<2.5	<2.5	<2.5	Naphthalene - 12 1-Methylnaphthalene - 7.7 2-Methylnaphthalene - 14 Fluorene - 0.026 Phenanthrene - 0.037	5.6	<500	1,100	2,300
MW-8	17.5-20	10/24/13	13	30	11	43	1.9	<0.25	<0.25	NA	NA	<50	51	570
Tier 1 Soil Concentrations Protective of Groundwater			0.02	2.09	17.23	2.91	0.04	0.0001	0.01	Total Naphthalene - 0.68 1-Methylnaphthalene - not published 2-Methylnaphthalene - not published Fluorene - 196.12 Phenanthrene - 270.07 Fluoranthene - 1,247.59	53.08			

1 - Only consitiuents detected above laboratory reporting limits are listed

2 - NA = Not analyzed for this constituent

TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS - BTEX/MTBE/EDB/EDC (8260B), PAHs (8270C), Disolved Lead (6010B) and TPH (8015B)

Fairview Station - Facility # 28779, Relese ID# 4657
1626 N. Riverside Drive, Espanola, New Mexico
Terracon Project No. 66127029

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (mg/Kg)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	PAHs[1] (µg/L)	Dissolved Lead (mg/L)	TPH (TX1005 Rev. 3) (mg/Kg)		
											MRO	DRO	GRO
MW-1	02/04/13	16,000	21,000	3,700	14,000	3,900	<10	64	Naphthalene - 630 1-Methylnaphthalene - 190 2-Methylnaphthalene - 350 Acenaphthene - 1.4 Fluorene - 1.4 Phenanthrene - 1.3	0.0035	<5.0	10	140
MW-2	02/04/13	**Not Sampled Due to PSH**											
MW-3	02/04/13	**Not Sampled Due to PSH**											
MW-4	10/29/13	<1.0	<1.0	<1.0	<2.0	31	<0.01	8.8	NA[2]	<0.005	NA	NA	NA
MW-5	10/29/13	4,300	1,100	740	2,000	540	<0.01	44	Naphthalene - 130 1-Methylnaphthalene - 36 2-Methylnaphthalene - 69	<0.005	NA	NA	NA
MW-6	10/29/13	10,000	23,000	3,100	13,000	110	<0.01	<50	Naphthalene - 450 1-Methylnaphthalene - 92 2-Methylnaphthalene - 170	<0.005	NA	NA	NA
MW-7	10/29/13	7,700	7,400	1,700	8,900	3,500	<0.01	<50	Naphthalene - 370 1-Methylnaphthalene - 88 2-Methylnaphthalene - 180	<0.005	NA	NA	NA
MW-8	10/29/13	**Not Sampled Due to PSH**											
WQCC Standards		10	750	750	620	100	0.1	10	Naphthalene - 30 1-Methylnaphthalene - 30 2-Methylnaphthalene - not published Acenaphthene - not published Fluorene - not published Phenanthrene - not published	0.05	*Not Applicable*		

1 - Only consitiuents detected above laboratory reporting limits are listed

2 - NA = Not analyzed for this constituent

TABLE 3
GROUND WATER AND NAPL MEASUREMENTS
Fairview Station - Facility # 28779, Relese ID# 4657, WP ID# 16613
1626 N. Riverside Drive
1626 N. Riverside Drive, Espanola, New Mexico

Monitor Well	Gauging Date	Total Depth From TOC[1] (feet)	Screened Interval (feet)	Top of Casing Elevation (feet)	Depth to Groundwater From TOC (feet)	Depth to NAPL (feet)	NAPL Thickness (feet)	NAPL Removed (gallons)	Cumulative NAPL Removed (gallons)	Groundwater Elevation[2] (feet)
MW-1	2/1/2013	28	13-28	5622.71	not measured	not measured		0.0	0.0	
	2/4/2013			5622.71	not measured	not measured		0.0	0.0	
	2/27/2013			5622.71	14.40	14.06	0.34	0.0	0.0	5608.56
	6/3/2013			5622.71	14.20	13.92	0.28	0.5	0.5	5608.71
	6/27/2013			5622.71	14.80	14.43	0.37	0.1	0.6	5608.18
	7/10/2013			5622.71	14.45	14.21	0.24	0.0	0.6	5608.43
	10/29/2013			5622.71	15.25	13.36	1.89	1.5	2.1	5608.84
	11/12/2013			5622.71	15.83	15.37	0.46	0.3	2.4	5607.22
	11/26/2013			5622.71	14.90	13.82	1.08	0.3	2.7	5608.60
MW-2	2/1/2013	28	13-28	5622.99	not measured	not measured		4.5	4.5	
	2/4/2013			5622.99	not measured	not measured		5.0	9.5	
	2/27/2013			5622.99	18.56	13.11	5.45	0.0	9.5	5608.40
	6/3/2013			5622.99	17.39	13.42	3.97	4.5	14.0	5608.49
	6/27/2013			5622.99	18.20	13.98	4.22	3.0	17.0	5607.87
	7/10/2013			5622.99	17.50	13.67	3.83	2.5	19.5	5608.28
	10/29/2013			5622.99	18.68	12.66	6.02	3.5	23.0	5608.70
	11/12/2013			5622.99	19.40	14.34	5.06	2.8	25.8	5607.28
	11/26/2013			5622.99	18.56	12.95	5.61	3.0	28.8	5608.52

TABLE 3 Con't.

GROUND WATER AND NAPL MEASUREMENTS

Fairview Station - Facility # 28779, Relese ID# 4657, WP ID# 16613
1626 N. Riverside Drive
1626 N. Riverside Drive, Espanola, New Mexico

Monitor Well	Gauging Date	Total Depth From TOC[1] (feet)	Screened Interval (feet)	Top of Casing Elevation (feet)	Depth to Groundwater From TOC (feet)	Depth to NAPL (feet)	NAPL Thickness (feet)	NAPL Removed (gallons)	Cumulative NAPL Removed (gallons)	Groundwater Elevation[2] (feet)
MW-3	2/1/2013	28	13-28	5623.02	not measured	not measured		0.5	0.5	
	2/4/2013			5623.02	not measured	not measured		2.0	2.5	
	2/27/2013			5623.02	16.69	13.80	2.89	0.0	2.5	5608.44
	6/3/2013			5623.02	17.57	13.46	4.11	4.5	7.0	5608.45
	6/27/2013			5623.02	18.33	13.88	4.45	3.5	10.5	5607.93
	7/10/2013			5623.02	17.68	13.70	3.98	3.0	13.5	5608.24
	10/29/2013			5623.02	19.46	12.50	6.96	7.0	20.5	5608.63
	11/12/2013			5623.02	20.62	13.19	7.43	5.0	25.5	5607.82
	11/26/2013			5623.02	19.02	13.02	6.00	4.3	29.8	5608.37
MW-4	10/29/2013	27	12-27	5623.67	14.13	14.13	0.00	0.0		5609.54
	11/12/2013			5623.67	15.12	15.12	0.00	0.0		5608.55
	11/26/2013			5623.67	15.20	15.20	0.00	0.0		5608.47
MW-5	10/29/2013	25	10-25	5622.41	13.77	13.77	0.00	0.0		5608.64
	11/12/2013			5622.41	13.93	13.93	0.00	0.0		5608.48
	11/26/2013			5622.41	14.07	14.07	0.00	0.0		5608.34
MW-6	10/29/2013	25	10-25	5622.80	13.97	13.97	0.00	0.0		5608.83
	11/12/2013			5622.80	14.40	14.39	0.01	0.0		5608.41
	11/26/2013			5622.80	14.33	14.31	0.02	0.0		5608.48
MW-7	10/29/2013	25	10-25	5622.86	14.17	14.17	0.00	0.0		5608.69
	11/12/2013			5622.86	14.62	14.62	0.00	0.0		5608.24
	11/26/2013			5622.86	14.50	14.50	0.00	0.0		5608.36
MW-8	10/29/2013	27	12-27	5623.90	17.35	13.80	3.55	2.5	2.5	5609.14
	11/12/2013			5623.90	21.03	14.49	6.54	3.0	5.5	5607.64
	11/26/2013			5623.90	18.30	14.05	4.25	3.5	9.0	5608.70

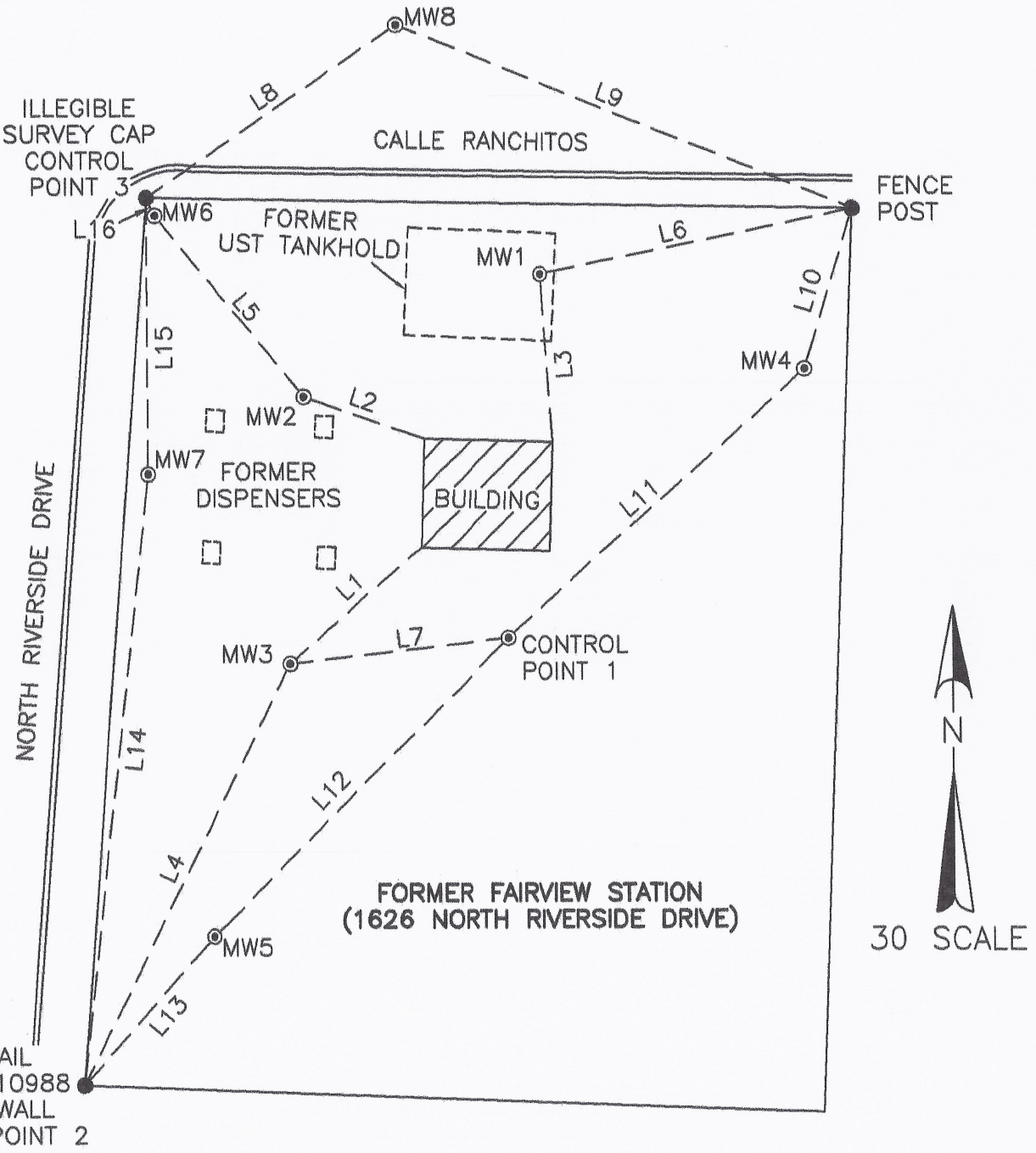
1 - TOC = Top-of-Casing elevation above mean sea level surveyed by a NM Licensed Surveyor.

2 - Product density value of 0.729 used for purpose of calculating water column overburden.

APPENDIX D

Monitoring Well Survey Data

MONITOR WELL SURVEY



LINE TABLE

LINE	BEARING & DISTANCE
L1	S48°44'40"W 32.40'
L2	N70°38'49"W 23.65'
L3	N04°11'35"W 31.07'
L4	N26°21'48"E 86.64'
L5	S39°36'04"E 43.36'
L6	S78°26'56"W 59.42'
L7	S83°19'28"W 40.84'
L8	N55°46'36"E 56.56'
L9	N68°08'43"W 91.55'
L10	S17°11'43"W 30.97'
L11	N48°18'19"E 74.23'
L12	S44°54'29"W 77.65'
L13	N41°29'46"E 36.56'
L14	N06°09'14"E 113.31'
L15	S00°17'57"E 50.95'
L16	S26°31'22"E 3.63'

LARRY L. STERLING
NEW MEXICO
11010
REGISTERED PROFESSIONAL SURVEYOR

SKETCH NO. 13065

SURVEY NO. 13065

HORIZONTAL DATUM IS NEW MEXICO STATE PLANE COORDINATES CENTRAL ZONE (3002). VALUES FOR CONTROL POINT 1 WERE OBTAIN FROM A FOUR (4) HOUR STATIC OBSERVATION USING A TOPCON GR-3 GLOBAL POSITIONING SYSTEM (GPS). THE OBSERVATIONS WERE SUBMITTED TO NGS AND THE FOLLOWING VALUES WERE RETURNED IN AN NGS OPUS SOLUTION REPORT.

POINT DESIGNATION	NORTHING	EASTING	ELEVATION
CONTROL POINT 1	1825340.421	1695422.675	5623.39
MONITOR WELL 1	1825409.173	1695426.257	5622.71
MONITOR WELL 2	1825386.590	1695381.991	5622.99
MONITOR WELL 3	1825337.298	1695379.440	5623.02
MONITOR WELL 4	1825389.793	1695478.099	5623.67
MONITOR WELL 5	1825285.429	1695367.859	5622.41
MONITOR WELL 6	1825418.399	1695357.139	5622.80
MONITOR WELL 7	1825370.705	1695355.782	5622.86
MONITOR WELL 8	1825453.463	1695402.285	5623.90

ELEVATIONS WERE TAKEN AT THE TOP OF A 2 INCH PVC PIPE OR METAL SLEEVE ON THE EXTREME WEST EDGE.
ELEVATIONS ARE NAD 83

I, LARRY L. STERLING, A REGISTERED NEW MEXICO PROFESSIONAL SURVEYOR, REGISTRATION NO. 11010, CERTIFY THAT I CONDUCTED THIS SURVEY IN THE FIELD ON FEBRUARY 22, 2013 AND NOVEMBER 15, 2013, THAT THE DATA AND SKETCH PROVIDED HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Larry L. Sterling 11-26-2013

LARRY L. STERLING, NMPS NO. 11010
RT. 4 BOX 160-9
ESPAÑOLA, NEW MEXICO 87532-8915
(505) 753-4171

APPENDIX E

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 13, 2013

Mark Hillier

Terracon
4905 Hawkins, NE
Albuquerque, NM 87109
TEL: (505) 715-0375
FAX (505) 797-4288

RE: Fairview Station OrderNo.: 1310C15

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/25/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-4 (7.5-10)
Project: Fairview Station
Collection Date: 10/23/2013 10:45:00 AM
Lab ID: 1310C15-001
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	33	10		mg/Kg	1	10/29/2013 10:08:45 PM	10024
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/29/2013 10:08:45 PM	10024
Surr: DNOP	99.3	66-131		%REC	1	10/29/2013 10:08:45 PM	10024
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	10		mg/Kg	2	10/28/2013 5:32:41 PM	R14380
Surr: BFB	108	74.5-129		%REC	2	10/28/2013 5:32:41 PM	R14380
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
Benzene	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
Toluene	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
Ethylbenzene	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
Xylenes, Total	ND	0.10		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	10/26/2013 5:55:50 PM	R14367
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	10/26/2013 5:55:50 PM	R14367
Surr: 4-Bromofluorobenzene	88.0	70-130		%REC	1	10/26/2013 5:55:50 PM	R14367
Surr: Dibromofluoromethane	107	70-130		%REC	1	10/26/2013 5:55:50 PM	R14367
Surr: Toluene-d8	87.3	70-130		%REC	1	10/26/2013 5:55:50 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5 (15-17.5)
Project: Fairview Station
Collection Date: 10/23/2013 1:30:00 PM
Lab ID: 1310C15-002
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	210	9.9		mg/Kg	1	10/29/2013 11:14:32 PM	10024
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/29/2013 11:14:32 PM	10024
Surr: DNOP	96.9	66-131		%REC	1	10/29/2013 11:14:32 PM	10024
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	350	250		mg/Kg	50	10/28/2013 11:37:45 PM	R14380
Surr: BFB	101	74.5-129		%REC	50	10/28/2013 11:37:45 PM	R14380
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
Methyl tert-butyl ether (MTBE)	ND	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
Benzene	ND	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
1,2-Dichloroethane (EDC)	ND	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
Toluene	4.7	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
Ethylbenzene	10	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
Xylenes, Total	40	5.0		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
1,2-Dibromoethane (EDB)	ND	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
1,2,4-Trimethylbenzene	23	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
1,3,5-Trimethylbenzene	7.0	2.5		mg/Kg	50	10/26/2013 6:53:09 PM	R14367
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	50	10/26/2013 6:53:09 PM	R14367
Surr: 4-Bromofluorobenzene	85.6	70-130		%REC	50	10/26/2013 6:53:09 PM	R14367
Surr: Dibromofluoromethane	101	70-130		%REC	50	10/26/2013 6:53:09 PM	R14367
Surr: Toluene-d8	100	70-130		%REC	50	10/26/2013 6:53:09 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-6 (12.5-15)
Project: Fairview Station
Collection Date: 10/23/2013 4:40:00 PM
Lab ID: 1310C15-003
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	380	10		mg/Kg	1	10/29/2013 11:36:42 PM	10024
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	10/29/2013 11:36:42 PM	10024
Surr: DNOP	99.1	66-131		%REC	1	10/29/2013 11:36:42 PM	10024
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	720	250		mg/Kg	50	10/29/2013 12:07:54 AM	R14380
Surr: BFB	115	74.5-129		%REC	50	10/29/2013 12:07:54 AM	R14380
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
Benzene	ND	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
Toluene	8.0	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
Ethylbenzene	16	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
Xylenes, Total	59	2.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
1,2,4-Trimethylbenzene	29	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
1,3,5-Trimethylbenzene	8.4	1.0		mg/Kg	20	10/26/2013 7:50:21 PM	R14367
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%REC	20	10/26/2013 7:50:21 PM	R14367
Surr: 4-Bromofluorobenzene	75.0	70-130		%REC	20	10/26/2013 7:50:21 PM	R14367
Surr: Dibromofluoromethane	93.2	70-130		%REC	20	10/26/2013 7:50:21 PM	R14367
Surr: Toluene-d8	97.5	70-130		%REC	20	10/26/2013 7:50:21 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-7 (10-12.5)
Project: Fairview Station
Collection Date: 10/24/2013 1:20:00 PM
Lab ID: 1310C15-004
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	1100	100		mg/Kg	10	10/30/2013 9:49:33 AM	10024
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	10/30/2013 9:49:33 AM	10024
Surr: DNOP	0	66-131	S	%REC	10	10/30/2013 9:49:33 AM	10024
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	2300	1000		mg/Kg	200	10/29/2013 12:38:06 AM	R14380
Surr: BFB	107	74.5-129		%REC	200	10/29/2013 12:38:06 AM	R14380
EPA METHOD 6010B: SOIL METALS						Analyst: **ELS**	
Lead	5.6	0.50		mg/Kg	2	11/12/2013 12:46:52 PM	10268
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	12	0.40		mg/Kg	20	11/5/2013 4:17:44 PM	10162
1-Methylnaphthalene	7.7	0.40		mg/Kg	20	11/5/2013 4:17:44 PM	10162
2-Methylnaphthalene	14	1.0		mg/Kg	50	11/5/2013 3:54:34 PM	10162
Acenaphthylene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Acenaphthene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Fluorene	0.026	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Phenanthrene	0.037	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Anthracene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Fluoranthene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Pyrene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Benz(a)anthracene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Chrysene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Benzo(b)fluoranthene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Benzo(k)fluoranthene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Benzo(a)pyrene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Dibenz(a,h)anthracene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Benzo(g,h,i)perylene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Indeno(1,2,3-cd)pyrene	ND	0.020		mg/Kg	1	11/5/2013 1:12:15 PM	10162
Surr: N-hexadecane	66.4	54.7-111		%REC	1	11/5/2013 1:12:15 PM	10162
Surr: Benzo(e)pyrene	70.1	54.9-125		%REC	1	11/5/2013 1:12:15 PM	10162
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
Methyl tert-butyl ether (MTBE)	ND	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
Benzene	5.1	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
1,2-Dichloroethane (EDC)	ND	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
Toluene	76	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
Ethylbenzene	61	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
Xylenes, Total	280	5.0		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
1,2-Dibromoethane (EDB)	ND	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-7 (10-12.5)
Project: Fairview Station
Collection Date: 10/24/2013 1:20:00 PM
Lab ID: 1310C15-004
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
1,2,4-Trimethylbenzene	81	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
1,3,5-Trimethylbenzene	24	2.5		mg/Kg	50	10/26/2013 8:47:40 PM	R14367
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%REC	50	10/26/2013 8:47:40 PM	R14367
Surr: 4-Bromofluorobenzene	76.5	70-130		%REC	50	10/26/2013 8:47:40 PM	R14367
Surr: Dibromofluoromethane	92.4	70-130		%REC	50	10/26/2013 8:47:40 PM	R14367
Surr: Toluene-d8	99.3	70-130		%REC	50	10/26/2013 8:47:40 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8 (17.5-20)
Project: Fairview Station
Collection Date: 10/24/2013 9:50:00 AM
Lab ID: 1310C15-005
Matrix: MEOH (SOIL)
Received Date: 10/25/2013 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	51	9.9		mg/Kg	1	10/30/2013 12:20:47 AM	10024
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/30/2013 12:20:47 AM	10024
Surr: DNOP	101	66-131		%REC	1	10/30/2013 12:20:47 AM	10024
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	570	250		mg/Kg	50	10/29/2013 1:08:17 AM	R14380
Surr: BFB	104	74.5-129		%REC	50	10/29/2013 1:08:17 AM	R14380
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **cadg**	
Methyl tert-butyl ether (MTBE)	1.9	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
Benzene	13	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
1,2-Dichloroethane (EDC)	ND	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
Toluene	30	2.5		mg/Kg	50	10/28/2013 8:16:03 PM	R14400
Ethylbenzene	11	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
Xylenes, Total	43	5.0		mg/Kg	50	10/28/2013 8:16:03 PM	R14400
1,2-Dibromoethane (EDB)	ND	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
1,2,4-Trimethylbenzene	11	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
1,3,5-Trimethylbenzene	3.2	0.25		mg/Kg	5	10/26/2013 9:44:55 PM	R14367
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	5	10/26/2013 9:44:55 PM	R14367
Surr: 4-Bromofluorobenzene	72.2	70-130		%REC	5	10/26/2013 9:44:55 PM	R14367
Surr: Dibromofluoromethane	101	70-130		%REC	5	10/26/2013 9:44:55 PM	R14367
Surr: Toluene-d8	97.8	70-130		%REC	5	10/26/2013 9:44:55 PM	R14367

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2 for VOA and TOC only.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID	**MB-10024**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**10024**		RunNo:	**14415**				
Prep Date:	**10/25/2013**	Analysis Date:	**10/29/2013**		SeqNo:	**414244**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.0	66	131			

Sample ID	**LCS-10024**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**10024**		RunNo:	**14415**				
Prep Date:	**10/25/2013**	Analysis Date:	**10/29/2013**		SeqNo:	**414246**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	77.1	128			
Surr: DNOP	4.7		5.000		93.2	66	131			

Sample ID	**1310C15-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Diesel Range Organics**				
Client ID:	**MW-4 (7.5-10)**	Batch ID:	**10024**		RunNo:	**14415**				
Prep Date:	**10/25/2013**	Analysis Date:	**10/29/2013**		SeqNo:	**414248**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	72	9.9	49.50	32.97	78.5	61.3	138			
Surr: DNOP	4.8		4.950		97.1	66	131			

Sample ID	**1310C15-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Diesel Range Organics**				
Client ID:	**MW-4 (7.5-10)**	Batch ID:	**10024**		RunNo:	**14415**				
Prep Date:	**10/25/2013**	Analysis Date:	**10/29/2013**		SeqNo:	**414250**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	720	10	50.05	32.97	1380	61.3	138	164	20	SR
Surr: DNOP	5.0		5.005		99.0	66	131	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**R14380**	RunNo:	**14380**					
Prep Date:		Analysis Date:	**10/28/2013**	SeqNo:	**413598**	Units:	**mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	5.0								
Surr: BFB		930		1000		93.0	74.5	129			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**R14380**	RunNo:	**14380**					
Prep Date:		Analysis Date:	**10/28/2013**	SeqNo:	**413601**	Units:	**mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		26	5.0	25.00	0	104	74.5	126			
Surr: BFB		990		1000		99.4	74.5	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R14400**	RunNo: **14400**
Prep Date:	Analysis Date: **10/28/2013**	SeqNo: **413491** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.5	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.5	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130			
Surr: Toluene-d8	0.54		0.5000		108	70	130			

Sample ID **100ng lcs1**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **R14400**	RunNo: **14400**
Prep Date:	Analysis Date: **10/28/2013**	SeqNo: **413492** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	1.0	0.050	1.000	0	102	69.9	139			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.1	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.1	70	130			
Surr: Toluene-d8	0.50		0.5000		99.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **mb-10162**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBS**	Batch ID: **10162**	RunNo: **14596**
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**	SeqNo: **419477** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.020								
1-Methylnaphthalene	ND	0.020								
2-Methylnaphthalene	ND	0.020								
Acenaphthylene	ND	0.020								
Acenaphthene	ND	0.020								
Fluorene	ND	0.020								
Phenanthrene	ND	0.020								
Anthracene	ND	0.020								
Fluoranthene	ND	0.020								
Pyrene	ND	0.020								
Benz(a)anthracene	ND	0.020								
Chrysene	ND	0.020								
Benzo(b)fluoranthene	ND	0.020								
Benzo(k)fluoranthene	ND	0.020								
Benzo(a)pyrene	ND	0.020								
Dibenz(a,h)anthracene	ND	0.020								
Benzo(g,h,i)perylene	ND	0.020								
Indeno(1,2,3-cd)pyrene	ND	0.020								
Surr: N-hexadecane	1.2		1.460		81.1	54.7	111			
Surr: Benzo(e)pyrene	0.27		0.3300		82.5	54.9	125			

Sample ID **lcs-10162**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS**	Batch ID: **10162**	RunNo: **14596**
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**	SeqNo: **419478** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.19	0.020	0.3300	0	56.2	42.5	118			
1-Methylnaphthalene	0.23	0.020	0.3300	0	68.3	43.5	122			
2-Methylnaphthalene	0.21	0.020	0.3300	0	63.5	41.1	122			
Acenaphthylene	0.24	0.020	0.3300	0	72.6	49.4	121			
Acenaphthene	0.26	0.020	0.3300	0	78.8	47.5	125			
Fluorene	0.26	0.020	0.3300	0	78.3	49.1	120			
Phenanthrene	0.25	0.020	0.3300	0	76.8	42.3	130			
Anthracene	0.24	0.020	0.3300	0	74.2	42.9	130			
Fluoranthene	0.25	0.020	0.3300	0	77.0	37	134			
Pyrene	0.25	0.020	0.3300	0	76.7	46.4	126			
Benz(a)anthracene	0.25	0.020	0.3300	0	76.1	50.6	126			
Chrysene	0.26	0.020	0.3300	0	80.1	36.8	123			
Benzo(b)fluoranthene	0.27	0.020	0.3300	0	82.1	47.2	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **lcs-10162**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS**	Batch ID: **10162**	RunNo: **14596**
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**	SeqNo: **419478** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	0.27	0.020	0.3300	0	82.9	40	122			
Benzo(a)pyrene	0.24	0.020	0.3300	0	72.2	44	118			
Dibenz(a,h)anthracene	0.27	0.020	0.3300	0	80.4	53.3	131			
Benzo(g,h,i)perylene	0.24	0.020	0.3300	0	73.5	46.7	129			
Indeno(1,2,3-cd)pyrene	0.26	0.020	0.3300	0	78.5	52	126			
Surr: N-hexadecane	1.2		1.460		80.4	54.7	111			
Surr: Benzo(e)pyrene	0.28		0.3300		84.0	54.9	125			

Sample ID **1310c15-004ams**	SampType: **MS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **MW-7 (10-12.5)**	Batch ID: **10162**	RunNo: **14596**
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**	SeqNo: **419488** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthylene	0.19	0.020	0.3288	0	58.8	54.3	107			
Acenaphthene	0.28	0.020	0.3288	0	84.5	50.2	114			
Fluorene	0.26	0.020	0.3288	0.02601	71.4	55.3	107			
Phenanthrene	0.28	0.020	0.3288	0.03735	74.6	54.7	118			
Anthracene	0.25	0.020	0.3288	0	76.0	54.9	116			
Fluoranthene	0.26	0.020	0.3288	0.006002	76.8	55.2	119			
Pyrene	0.27	0.020	0.3288	0.009003	78.9	60.2	115			
Benz(a)anthracene	0.26	0.020	0.3288	0	78.2	61.9	120			
Chrysene	0.28	0.020	0.3288	0	84.7	42.5	117			
Benzo(b)fluoranthene	0.30	0.020	0.3288	0	91.4	57.4	124			
Benzo(k)fluoranthene	0.28	0.020	0.3288	0	86.0	52.6	107			
Benzo(a)pyrene	0.26	0.020	0.3288	0	80.0	55.7	106			
Dibenz(a,h)anthracene	0.29	0.020	0.3288	0	87.1	51.8	130			
Benzo(g,h,i)perylene	0.26	0.020	0.3288	0	78.6	59.2	114			
Indeno(1,2,3-cd)pyrene	0.27	0.020	0.3288	0	81.9	56.8	120			
Surr: N-hexadecane	1.0		1.455		70.8	54.7	111			
Surr: Benzo(e)pyrene	0.24		0.3288		73.7	54.9	125			

Sample ID **1310c15-004amsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **MW-7 (10-12.5)**	Batch ID: **10162**	RunNo: **14596**
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**	SeqNo: **419489** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthylene	0.27	0.020	0.3284	0	81.2	54.3	107	31.9	20	R
Acenaphthene	0.30	0.020	0.3284	0	91.8	50.2	114	8.11	20.5	
Fluorene	0.33	0.020	0.3284	0.02601	93.5	55.3	107	24.4	20	R
Phenanthrene	0.30	0.020	0.3284	0.03735	79.1	54.7	118	5.02	22	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **1310c15-004amsd**	SampType: **MSD**		TestCode: **EPA Method 8270C: PAHs**		
Client ID: **MW-7 (10-12.5)**	Batch ID: **10162**		RunNo: **14596**		
Prep Date: **11/4/2013**	Analysis Date: **11/5/2013**		SeqNo: **419489**	Units: **mg/Kg**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Anthracene	0.26	0.020	0.3284	0	79.5	54.9	116	4.42	26.6	
Fluoranthene	0.28	0.020	0.3284	0.006002	83.6	55.2	119	8.24	23.7	
Pyrene	0.26	0.020	0.3284	0.009003	76.9	60.2	115	2.64	29.3	
Benz(a)anthracene	0.26	0.020	0.3284	0	80.2	61.9	120	2.42	25.4	
Chrysene	0.28	0.020	0.3284	0	85.2	42.5	117	0.343	27.6	
Benzo(b)fluoranthene	0.33	0.020	0.3284	0	99.8	57.4	124	8.64	20	
Benzo(k)fluoranthene	0.30	0.020	0.3284	0	90.8	52.6	107	5.35	31.3	
Benzo(a)pyrene	0.28	0.020	0.3284	0	84.7	55.7	106	5.63	22.1	
Dibenz(a,h)anthracene	0.29	0.020	0.3284	0	88.0	51.8	130	0.906	21.2	
Benzo(g,h,i)perylene	0.27	0.020	0.3284	0	83.7	59.2	114	6.21	25.9	
Indeno(1,2,3-cd)pyrene	0.28	0.020	0.3284	0	85.2	56.8	120	3.74	20.4	
Surr: N-hexadecane	1.2		1.453		80.9	54.7	111	0	0	
Surr: Benzo(e)pyrene	0.26		0.3284		77.7	54.9	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310C15**

13-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID	**MB-10268**	SampType:	**MBLK**	TestCode:	**EPA Method 6010B: Soil Metals**					
Client ID:	**PBS**	Batch ID:	**10268**	RunNo:	**14744**					
Prep Date:	**11/11/2013**	Analysis Date:	**11/12/2013**	SeqNo:	**424247**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								

Sample ID	**LCS-10268**	SampType:	**LCS**	TestCode:	**EPA Method 6010B: Soil Metals**					
Client ID:	**LCSS**	Batch ID:	**10268**	RunNo:	**14744**					
Prep Date:	**11/11/2013**	Analysis Date:	**11/12/2013**	SeqNo:	**424248**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	24	0.25	25.00	0	95.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-Alb | Work Order Number: 1310C15 | RcptNo: 1

Received by/date: 10/25/13

Logged By: **Lindsay Mangin** 10/25/2013 7:43:00 AM

Completed By: **Lindsay Mangin** 10/25/2013 7:53:33 AM

Reviewed By: 10/25/13

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Not Present			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Terracon

Mailing Address: 4905 Hawkins NE Albuquerque, NM 87109

Phone #: 505-797-4287

email or Fax#: mrhillier@terracon.com

QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☒ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: Fairview Station

Project #: 66127029.2

Project Manager: Mark Hillier

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX/MTBE/EDB/EDC TMB				Air Bubbles (Y or N)
10/23/13	1045	S	MW-4(7.5-10)	(2) 2oz (1) 4oz	methanol	1310615-001			X									X				
"	1330	S	MW-5(15-17.5)	"	"	-002			X									X				
"	1640	S	MW-6(12.5-15)	"	"	-003			X									X				
10/24/13	1320	S	MW-7(10-12.5)	"	"	-004			X									X				
"	0950	S	MW-8(17.5-20)	"	"	-005			X									X				

Add PAH + Pb to HEAL-4 of 10/31

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/25/13	0743			10/25/13	0743
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Hold for additional PAH & lead analysis.

All samples heavily contaminated

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 07, 2013

Mark Hillier

Terracon
4905 Hawkins, NE
Albuquerque, NM 87109
TEL: (505) 715-0375
FAX (505) 797-4288

RE: Fairview Station OrderNo.: 1310D96

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/30/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW4
Project: Fairview Station
Collection Date: 10/29/2013 2:20:00 PM
Lab ID: 1310D96-001
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **LRW**	
1,2-Dibromoethane	ND	0.010		µg/L	1	10/30/2013 2:41:02 PM	10106
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Lead	ND	0.0050		mg/L	1	11/6/2013 4:56:11 PM	10186
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	0.72	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
1-Methylnaphthalene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
2-Methylnaphthalene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Acenaphthylene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Acenaphthene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Fluorene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Phenanthrene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Anthracene	ND	0.75		µg/L	1	11/4/2013 3:05:54 PM	10141
Fluoranthene	ND	0.75		µg/L	1	11/4/2013 3:05:54 PM	10141
Pyrene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Benz(a)anthracene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Chrysene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Benzo(a)pyrene	ND	0.50		µg/L	1	11/4/2013 3:05:54 PM	10141
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	11/4/2013 3:05:54 PM	10141
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	11/4/2013 3:05:54 PM	10141
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	11/4/2013 3:05:54 PM	10141
Surr: N-hexadecane	73.2	24.2-124		%REC	1	11/4/2013 3:05:54 PM	10141
Surr: Benzo(e)pyrene	70.2	26-132		%REC	1	11/4/2013 3:05:54 PM	10141
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
Toluene	ND	1.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
Ethylbenzene	ND	1.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
Methyl tert-butyl ether (MTBE)	31	1.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
1,2-Dichloroethane (EDC)	8.8	1.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
Xylenes, Total	ND	2.0		µg/L	1	10/31/2013 1:36:37 PM	R14493
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%REC	1	10/31/2013 1:36:37 PM	R14493
Surr: 4-Bromofluorobenzene	85.0	70-130		%REC	1	10/31/2013 1:36:37 PM	R14493
Surr: Dibromofluoromethane	103	70-130		%REC	1	10/31/2013 1:36:37 PM	R14493
Surr: Toluene-d8	95.5	70-130		%REC	1	10/31/2013 1:36:37 PM	R14493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW5
Project: Fairview Station
Collection Date: 10/29/2013 1:45:00 PM
Lab ID: 1310D96-002
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **LRW**	
1,2-Dibromoethane	ND	0.010		µg/L	1	10/30/2013 3:22:21 PM	10106
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Lead	ND	0.0050		mg/L	1	11/6/2013 5:07:27 PM	10186
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	130	5.0		µg/L	10	11/4/2013 5:25:19 PM	10141
1-Methylnaphthalene	36	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
2-Methylnaphthalene	69	5.0		µg/L	10	11/4/2013 5:25:19 PM	10141
Acenaphthylene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Acenaphthene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Fluorene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Phenanthrene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Anthracene	ND	0.75		µg/L	1	11/4/2013 4:15:38 PM	10141
Fluoranthene	ND	0.75		µg/L	1	11/4/2013 4:15:38 PM	10141
Pyrene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Benz(a)anthracene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Chrysene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Benzo(a)pyrene	ND	0.50		µg/L	1	11/4/2013 4:15:38 PM	10141
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	11/4/2013 4:15:38 PM	10141
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	11/4/2013 4:15:38 PM	10141
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	11/4/2013 4:15:38 PM	10141
Surr: N-hexadecane	76.3	24.2-124		%REC	1	11/4/2013 4:15:38 PM	10141
Surr: Benzo(e)pyrene	71.1	26-132		%REC	1	11/4/2013 4:15:38 PM	10141
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	4300	100		µg/L	100	10/31/2013 2:05:23 PM	R14493
Toluene	1100	100		µg/L	100	10/31/2013 2:05:23 PM	R14493
Ethylbenzene	740	10		µg/L	10	10/30/2013 6:51:56 PM	R14462
Methyl tert-butyl ether (MTBE)	540	10		µg/L	10	10/30/2013 6:51:56 PM	R14462
1,2-Dichloroethane (EDC)	44	10		µg/L	10	10/30/2013 6:51:56 PM	R14462
Xylenes, Total	2000	20		µg/L	10	10/30/2013 6:51:56 PM	R14462
Surr: 1,2-Dichloroethane-d4	111	70-130		%REC	10	10/30/2013 6:51:56 PM	R14462
Surr: 4-Bromofluorobenzene	85.3	70-130		%REC	10	10/30/2013 6:51:56 PM	R14462
Surr: Dibromofluoromethane	101	70-130		%REC	10	10/30/2013 6:51:56 PM	R14462
Surr: Toluene-d8	97.7	70-130		%REC	10	10/30/2013 6:51:56 PM	R14462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW6
Project: Fairview Station
Collection Date: 10/29/2013 3:00:00 PM
Lab ID: 1310D96-003
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **LRW**	
1,2-Dibromoethane	ND	0.010		µg/L	1	10/30/2013 3:36:11 PM	10106
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Lead	ND	0.0050		mg/L	1	11/6/2013 5:10:16 PM	10186
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	450	10		µg/L	20	11/4/2013 5:48:31 PM	10141
1-Methylnaphthalene	92	10		µg/L	20	11/4/2013 5:48:31 PM	10141
2-Methylnaphthalene	170	10		µg/L	20	11/4/2013 5:48:31 PM	10141
Acenaphthylene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Acenaphthene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Fluorene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Phenanthrene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Anthracene	ND	0.75		µg/L	1	11/4/2013 4:38:53 PM	10141
Fluoranthene	ND	0.75		µg/L	1	11/4/2013 4:38:53 PM	10141
Pyrene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Benz(a)anthracene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Chrysene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Benzo(a)pyrene	ND	0.50		µg/L	1	11/4/2013 4:38:53 PM	10141
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	11/4/2013 4:38:53 PM	10141
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	11/4/2013 4:38:53 PM	10141
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	11/4/2013 4:38:53 PM	10141
Surr: N-hexadecane	73.2	24.2-124		%REC	1	11/4/2013 4:38:53 PM	10141
Surr: Benzo(e)pyrene	74.9	26-132		%REC	1	11/4/2013 4:38:53 PM	10141
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	10000	500		µg/L	500	10/31/2013 2:34:01 PM	R14493
Toluene	23000	500		µg/L	500	10/31/2013 2:34:01 PM	R14493
Ethylbenzene	3100	50		µg/L	50	10/30/2013 7:20:37 PM	R14462
Methyl tert-butyl ether (MTBE)	110	50		µg/L	50	10/30/2013 7:20:37 PM	R14462
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	10/30/2013 7:20:37 PM	R14462
Xylenes, Total	13000	100		µg/L	50	10/30/2013 7:20:37 PM	R14462
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%REC	50	10/30/2013 7:20:37 PM	R14462
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	50	10/30/2013 7:20:37 PM	R14462
Surr: Dibromofluoromethane	95.8	70-130		%REC	50	10/30/2013 7:20:37 PM	R14462
Surr: Toluene-d8	97.6	70-130		%REC	50	10/30/2013 7:20:37 PM	R14462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2 for VOA and TOC only.
RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW7
Project: Fairview Station
Collection Date: 10/29/2013 1:20:00 PM
Lab ID: 1310D96-004
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **LRW**	
1,2-Dibromoethane	ND	0.010		µg/L	1	10/30/2013 3:50:07 PM	10106
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Lead	ND	0.0050		mg/L	1	11/6/2013 5:12:51 PM	10186
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	370	5.0		µg/L	10	11/4/2013 6:11:43 PM	10141
1-Methylnaphthalene	88	5.0		µg/L	10	11/4/2013 6:11:43 PM	10141
2-Methylnaphthalene	180	5.0		µg/L	10	11/4/2013 6:11:43 PM	10141
Acenaphthylene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Acenaphthene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Fluorene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Phenanthrene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Anthracene	ND	0.75		µg/L	1	11/4/2013 5:02:08 PM	10141
Fluoranthene	ND	0.75		µg/L	1	11/4/2013 5:02:08 PM	10141
Pyrene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Benz(a)anthracene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Chrysene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Benzo(a)pyrene	ND	0.50		µg/L	1	11/4/2013 5:02:08 PM	10141
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	11/4/2013 5:02:08 PM	10141
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	11/4/2013 5:02:08 PM	10141
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	11/4/2013 5:02:08 PM	10141
Surr: N-hexadecane	82.8	24.2-124		%REC	1	11/4/2013 5:02:08 PM	10141
Surr: Benzo(e)pyrene	74.7	26-132		%REC	1	11/4/2013 5:02:08 PM	10141
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	7700	100		µg/L	100	10/31/2013 3:02:44 PM	R14493
Toluene	7400	100		µg/L	100	10/31/2013 3:02:44 PM	R14493
Ethylbenzene	1700	50		µg/L	50	10/30/2013 8:18:01 PM	R14462
Methyl tert-butyl ether (MTBE)	3500	50		µg/L	50	10/30/2013 8:18:01 PM	R14462
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	10/30/2013 8:18:01 PM	R14462
Xylenes, Total	8900	100		µg/L	50	10/30/2013 8:18:01 PM	R14462
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	50	10/30/2013 8:18:01 PM	R14462
Surr: 4-Bromofluorobenzene	90.5	70-130		%REC	50	10/30/2013 8:18:01 PM	R14462
Surr: Dibromofluoromethane	102	70-130		%REC	50	10/30/2013 8:18:01 PM	R14462
Surr: Toluene-d8	96.5	70-130		%REC	50	10/30/2013 8:18:01 PM	R14462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: Field Blank
Project: Fairview Station
Collection Date: 10/29/2013 1:15:00 PM
Lab ID: 1310D96-005
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	10/30/2013 9:15:25 PM	R14462
Toluene	ND	1.0		µg/L	1	10/30/2013 9:15:25 PM	R14462
Ethylbenzene	ND	1.0		µg/L	1	10/30/2013 9:15:25 PM	R14462
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2013 9:15:25 PM	R14462
Xylenes, Total	ND	2.0		µg/L	1	10/30/2013 9:15:25 PM	R14462
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	10/30/2013 9:15:25 PM	R14462
Surr: 4-Bromofluorobenzene	98.4	70-130		%REC	1	10/30/2013 9:15:25 PM	R14462
Surr: Dibromofluoromethane	106	70-130		%REC	1	10/30/2013 9:15:25 PM	R14462
Surr: Toluene-d8	94.8	70-130		%REC	1	10/30/2013 9:15:25 PM	R14462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: Trip Blank
Project: Fairview Station
Collection Date:
Lab ID: 1310D96-006
Matrix: AQUEOUS
Received Date: 10/30/2013 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB						Analyst: **LRW**	
1,2-Dibromoethane	ND	0.010		µg/L	1	10/30/2013 4:17:49 PM	10106
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
Toluene	ND	1.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
Ethylbenzene	ND	1.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
Xylenes, Total	ND	2.0		µg/L	1	10/30/2013 9:44:07 PM	R14462
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	10/30/2013 9:44:07 PM	R14462
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	1	10/30/2013 9:44:07 PM	R14462
Surr: Dibromofluoromethane	103	70-130		%REC	1	10/30/2013 9:44:07 PM	R14462
Surr: Toluene-d8	94.3	70-130		%REC	1	10/30/2013 9:44:07 PM	R14462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID	**MB-10106**	SampType:	**MBLK**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**PBW**	Batch ID:	**10106**		RunNo:	**14451**				
Prep Date:	**10/30/2013**	Analysis Date:	**10/30/2013**		SeqNo:	**415342**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-10106**	SampType:	**LCS**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**LCSW**	Batch ID:	**10106**		RunNo:	**14451**				
Prep Date:	**10/30/2013**	Analysis Date:	**10/30/2013**		SeqNo:	**415343**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	104	70	130			

Sample ID	**1310D96-001BMS**	SampType:	**MS**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**MW4**	Batch ID:	**10106**		RunNo:	**14451**				
Prep Date:	**10/30/2013**	Analysis Date:	**10/30/2013**		SeqNo:	**415347**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	107	52	149			

Sample ID	**1310D96-001BMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**MW4**	Batch ID:	**10106**		RunNo:	**14451**				
Prep Date:	**10/30/2013**	Analysis Date:	**10/30/2013**		SeqNo:	**415348**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	106	52	149	0.939	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R14462**	RunNo: **14462**
Prep Date:	Analysis Date: **10/30/2013**	SeqNo: **415548** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R14462**	RunNo: **14462**
Prep Date:	Analysis Date: **10/30/2013**	SeqNo: **415549** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	21	1.0	20.00	0	105	82.2	124			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R14493**	RunNo: **14493**
Prep Date:	Analysis Date: **10/31/2013**	SeqNo: **416282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.3		10.00		93.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R14493**	RunNo: **14493**
Prep Date:	Analysis Date: **10/31/2013**	SeqNo: **416287** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	22	1.0	20.00	0	109	82.2	124			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **mb-10141**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418087** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.75								
Fluoranthene	ND	0.75								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.75								
Benzo(g,h,i)perylene	ND	0.75								
Indeno(1,2,3-cd)pyrene	ND	1.0								
Surr: N-hexadecane	60		87.60		68.0	24.2	124			
Surr: Benzo(e)pyrene	14		20.00		68.7	26	132			

Sample ID **lcs-10141**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	67.5	43.1	99.5			
1-Methylnaphthalene	15	0.50	20.00	0	72.8	44.3	107			
2-Methylnaphthalene	14	0.50	20.00	0	70.2	42.2	102			
Acenaphthylene	15	0.50	20.00	0	75.9	46.3	109			
Acenaphthene	16	0.50	20.00	0	80.4	47.4	111			
Fluorene	16	0.50	20.00	0	78.5	46.2	106			
Phenanthrene	15	0.50	20.00	0	76.5	48.7	115			
Anthracene	15	0.75	20.00	0	73.2	47.8	113			
Fluoranthene	15	0.75	20.00	0	75.8	46.7	110			
Pyrene	14	0.50	20.00	0	71.5	48.4	108			
Benz(a)anthracene	14	0.50	20.00	0	69.8	42.9	118			
Chrysene	13	0.50	20.00	0	66.0	28.8	117			
Benzo(b)fluoranthene	16	0.50	20.00	0	78.2	47.3	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **lcs-10141**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	16	0.50	20.00	0	78.7	46	113			
Benzo(a)pyrene	14	0.50	20.00	0	72.5	53.1	96.1			
Dibenz(a,h)anthracene	15	0.75	20.00	0	77.1	44.3	115			
Benzo(g,h,i)perylene	15	0.75	20.00	0	74.2	44.4	121			
Indeno(1,2,3-cd)pyrene	15	1.0	20.00	0	76.1	47.5	115			
Surr: N-hexadecane	67		87.60		76.0	24.2	124			
Surr: Benzo(e)pyrene	15		20.00		73.1	26	132			

Sample ID **1310D96-001Cms**	SampType: **MS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **MW4**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418096** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	21	0.50	20.00	0.7200	102	45	110			
1-Methylnaphthalene	23	0.50	20.00	0	113	45	110			S
2-Methylnaphthalene	20	0.50	20.00	0.2600	101	45	110			
Acenaphthylene	23	0.50	20.00	0	116	45	110			S
Acenaphthene	24	0.50	20.00	0	122	45	110			S
Fluorene	24	0.50	20.00	0	122	45	110			S
Phenanthrene	22	0.50	20.00	0	110	45	110			S
Anthracene	21	0.75	20.00	0	104	45	110			
Fluoranthene	21	0.75	20.00	0	105	45	110			
Pyrene	21	0.50	20.00	0	105	45	110			
Benz(a)anthracene	20	0.50	20.00	0	99.2	45	110			
Chrysene	21	0.50	20.00	0	106	45	110			
Benzo(b)fluoranthene	23	0.50	20.00	0	115	45	110			S
Benzo(k)fluoranthene	22	0.50	20.00	0	109	45	110			
Benzo(a)pyrene	22	0.50	20.00	20.64	6.30	45	110			S
Dibenz(a,h)anthracene	22	0.75	20.00	0	111	45	110			S
Benzo(g,h,i)perylene	21	0.75	20.00	0	107	45	110			
Indeno(1,2,3-cd)pyrene	22	1.0	20.00	0	110	45	110			S
Surr: N-hexadecane	98		87.60		112	24.2	124			
Surr: Benzo(e)pyrene	21		20.00		104	26	132			

Sample ID **1310D96-001Cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **MW4**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418097** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0.7200	82.3	45	110	20.4	20	R

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID **1310D96-001Cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **MW4**	Batch ID: **10141**	RunNo: **14561**
Prep Date: **11/1/2013**	Analysis Date: **11/4/2013**	SeqNo: **418097** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	18	0.50	20.00	0	88.6	45	110	24.3	20	R
2-Methylnaphthalene	16	0.50	20.00	0.2600	80.6	45	110	22.1	20	R
Acenaphthylene	16	0.50	20.00	0	80.4	45	110	35.8	20	R
Acenaphthene	18	0.50	20.00	0	91.2	45	110	28.7	20	R
Fluorene	18	0.50	20.00	0	88.9	45	110	31.3	20	R
Phenanthrene	18	0.50	20.00	0	88.0	45	110	22.4	20	R
Anthracene	17	0.75	20.00	0	85.4	45	110	19.8	20	
Fluoranthene	16	0.75	20.00	0	81.7	45	110	24.9	20	R
Pyrene	17	0.50	20.00	0	83.1	45	110	23.1	20	R
Benz(a)anthracene	15	0.50	20.00	0	75.3	45	110	27.4	20	R
Chrysene	15	0.50	20.00	0	76.7	45	110	31.8	20	R
Benzo(b)fluoranthene	20	0.50	20.00	0	98.9	45	110	15.2	20	
Benzo(k)fluoranthene	18	0.50	20.00	0	92.1	45	110	17.0	20	
Benzo(a)pyrene	17	0.50	20.00	20.64	-17.7	45	110	24.6	20	SR
Dibenz(a,h)anthracene	18	0.75	20.00	0	89.5	45	110	21.7	20	R
Benzo(g,h,i)perylene	17	0.75	20.00	0	86.0	45	110	21.9	20	R
Indeno(1,2,3-cd)pyrene	18	1.0	20.00	0	88.1	45	110	22.5	20	R
Surr: N-hexadecane	69		87.60		78.9	24.2	124	0	0	
Surr: Benzo(e)pyrene	17		20.00		86.8	26	132	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310D96**

07-Nov-13

Client: Terracon

Project: Fairview Station

Sample ID	**MB-10186**	SampType:	**MBLK**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID:	**10186**	RunNo:	**14624**					
Prep Date:	**11/5/2013**	Analysis Date:	**11/6/2013**	SeqNo:	**420614**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID	**LCS-10186**	SampType:	**LCS**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID:	**10186**	RunNo:	**14624**					
Prep Date:	**11/5/2013**	Analysis Date:	**11/6/2013**	SeqNo:	**420615**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.50	0.0050	0.5000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-Alb | Work Order Number: 1310D96 | RcptNo: 1

Received by/date: AT 10/30/13

Logged By: Anne Thorne 10/30/2013 8:00:00 AM Anne Thorne

Completed By: Anne Thorne 10/30/2013 Anne Thorne

Reviewed By: IO 10/30/13

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted)

Adjusted? _____

Checked by: AT 10/30/13

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Not Present			

Chain-of-Custody Record

Client: Terracon

Mailing Address: 4905 Hawkins NE

Phone #: 505-797-4287

email or Fax#: mrhillier@terracon.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: FAIRVIEW STATION

Project #: 66127029

Project Manager: Mark Hillier

Sampler: Julie Smith

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1310D96	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas Only) 8260B	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1) & EDC	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA) PAHs	Lead by 6010B				Air Bubbles (Y or N)
10/29/13	1420	GW	MW4		for 504.1 & 8270	-001		X			X						X	X				
	1345	GW	MW5			-002		X			X						X	X				
	1500	GW	MW6			-003		X			X						X	X				
	1320	GW	MW7			-004		X			X						X	X				
	1315	GW	Field Blank			-005		X (BTEX/MTBE ONLY)														
			Trip Blank			-006		X			X											
			10/30/13																			

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/30/13	8:00AM			10/30/13	0800
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
BTEX/MTBE, EDB, EDC by SW846 Method 8260B
PAHs by SW846 Method 8270
Lead by SW846 Method 6010B

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX F

Health and Safety Plan

SAFETY AND HEALTH PLAN
PETROLEUM HYDROCARBON CONTAMINATION ANTICIPATED

PROJECT NAME: Former Fuel Station

LOCATION: 1626 North Riverside Drive, Espanola, New Mexico

TERRACON PROJECT NUMBER: 66127029

START DATE: October 23, 2013

1.0 APPLICABILITY

This Safety and Health Plan (Plan) will be used exclusively for Terracon projects involving:

- UST Removals (UST Addendum required)
- Intrusive Investigations
- Remedial Assessments
- Site Remediation
- Spill Control/Emergency Response

where petroleum hydrocarbons (gasoline, diesel fuel, waste oils, fuel oils, petroleum based hydraulic fluids, etc.) are the only known contaminants of concern. If contaminants other than petroleum hydrocarbons are known or suspected, the Project Manager will contact the Corporate Safety and Health Manager to arrange for development of a site and contaminant-specific Safety and Health Plan.

Subcontractors engaged in project activity at this site will comply applicable provisions of the Occupational Safety and Health Act of 1970, the safety and health requirements set forth in Occupational Safety and Health Administration regulation 29 CFR 1910.120, where applicable, and any applicable state, city or local safety codes. Each subcontractor will be responsible for supplying a Competent Person to oversee drilling work at this project site. The drilling subcontractor has primary responsibility for utilizing equipment and work practices necessary to protect the safety of the subcontractor's employees engaged in this project.

The subcontractor will maintain an orderly and safe work area around drilling/excavation equipment to minimize the potential for accidents. In addition, the subcontractor shall provide whatever safety barricades or warning devices are deemed necessary by Terracon to prevent accidents or injury to field personnel and the general public.

Subcontractors engaged on this project site may utilize this site Safety and Health Plan for their employees, or each subcontractor may develop and utilize their own site Safety and Health Plan provided the provisions of the subcontractor's site Safety and Health Plan are at least as stringent as the requirements contained in this Plan. Decisions regarding equivalence of safety and health requirements shall be made by Terracon Project Manager and Corporate Safety and Health Manager. Adoption of this Site Safety and Health Plan by subcontract employers shall not relieve any site subcontractor for the responsibility for the health and safety of its employees.

2.0 SAFETY AND HEALTH ADMINISTRATION

The Project Manager is ultimately responsible for seeing that work on this project is performed in accordance with the safety and health provisions contained in this Plan. The designated Site Safety and Health Officer (SSO) will monitor compliance with this Plan during field activities. All field team members engaged in project activities will be required to sign the "Acknowledgment of Instruction" form included with this Plan. The SSO will maintain a copy of this Plan on site for the duration of project activities.

Terracon and subcontractor task leaders will be responsible for:

- Providing subordinate personnel a copy of this Plan, and briefing them on its content.
- Enforcing the applicable provisions of this Plan.
- Inspecting and maintaining equipment in compliance with applicable federal, state or local safety regulations.
- Enforcement of corrective actions.
- Investigation of accidents or injuries.

The following individuals will be responsible for implementation and enforcement of the Plan:

TITLE	NAME	PHONE
Project Manager:	Mark R. Hillier	505-797-4287
Terracon Safety and Health Manager:	Gary K. Bradley, CSP, CHMM	913-599-6886
Site Safety and Health Officer:	Mark R. Hillier	505-797-4287
Terracon Task Leader(s):	Julie A. Smith	505-205-7077
Subcontractor Task Leader:	Rodney Hammer	505-857-9876

If hazardous conditions develop during the course of project activity, the SSO in conjunction with the Terracon Corporate Safety and Health Manager, will coordinate actions required to safeguard site personnel and members of the general public. Additional safety measures will be verbally communicated to all project personnel, recorded in writing and appended to this Plan.

3.0 MEDICAL SURVEILLANCE REQUIREMENTS

All Terracon personnel participating in this project shall be enrolled in a health monitoring program in accordance with the provisions of OSHA 29 CFR 1910.120 and 1910.134. Each project participant shall be certified by a Doctor of Medicine as fit for respirator and semi-

permeable/impermeable protective equipment use. All personnel shall have received an environmental physical examination within one year prior to the start of project activities.

4.0 EMPLOYEE TRAINING REQUIREMENTS

All Terracon personnel must have completed 40 hour Hazardous Waste Operations Training and at least three days of supervised field activity per the requirements of OSHA 29 CFR 1910.120. In addition, a current 8-hour annual refresher training certificate will be required for all personnel. Training certificates for all project personnel will be maintained by the Corporate Safety and Health Manager and/or the SSO at the project command center.

Prior to the start of site activities, the SSO will conduct a pre-project safety and health briefing for all project participants. The personnel responsible for project safety and health will be addressed, as will site history, scope of work, site control measures, emergency procedures and site communications. The briefing will address site contaminants, air monitoring protocols, action levels for upgrade/downgrade of personal protective equipment and level of personal protective equipment to be employed for each project task.

Safety and health briefings will be presented by the SSO at the start of each work day. In addition to a general review of the proposed daily activity and safety requirements, the results of previous air monitoring and any procedural changes will be addressed.

5.0 RESPIRATORY PROTECTION PROGRAM

The purpose of the Terracon respiratory protection program is to prevent personnel exposure to airborne contaminants in excess of established permissible exposure limits/threshold limit values. All respirators employed by Terracon personnel will be NIOSH approved. Cartridges and filters for air purifying respirators will be appropriate for the contaminant(s) of concern. Cartridge/filter selection will be made by the Terracon Corporate Safety and Health Manager. Project personnel required to wear respiratory protection will be medically cleared for respirator use, trained and successfully fit tested in accordance with OSHA 29 CFR 1910.134. Personnel required to wear supplied air respirators will demonstrate competence in donning/doffing and inspecting the equipment prior to job assignment. All project tasks requiring the use of supplied air respirators will require properly equipped backup personnel ("buddy system").

At a minimum, air purifying respirator cartridges will be changed daily prior to use. More frequent change of respirator cartridges will be based on the results of site air monitoring. Under no circumstances will air purifying respirators be used in areas deficient in oxygen (<19.5%), in areas classified as immediately dangerous to life and health (IDLH) or in areas where contaminants have not been characterized.

Respirators will be inspected and required fit checks will be performed prior to use, and any necessary repairs will be made before proceeding to the project site. Respirators will be sanitized daily after use.

6.0 SITE HISTORY/SCOPE OF SERVICES

Preliminary information obtained from the client indicates that this project site may be contaminated with petroleum hydrocarbons. The personal protective equipment and direct reading air monitoring protocols specified below are designed to prevent personnel exposure to contamination in excess of permissible exposure limits.

6.1 Scope of Services

X Soil/Groundwater Sampling

X Soil Boring (Drill Rig)

___ Remedial System Installation

___ Other (_____)

___ Soil Boring (Hand Auger)

___ UST Removal *(requires tank removal addendum*)

X Monitoring Well Installation

7.0 HAZARD ASSESSMENT

7.1 Chemical Hazards

Soils/groundwater at this project site may be contaminated with petroleum hydrocarbons. Benzene is the most significant health hazard contained in petroleum blends and typically comprises less than 1% of regular grade gasoline. Specific health hazard information on petroleum compounds and their most health-significant volatile fractions are provided below. Additional health-hazard information may be found in the chemical product information sheets attached to this Plan. Personnel engaged in monitoring well sampling are advised that organic vapors from contaminated groundwater can collect in wells and be displaced by bailers. Personnel are advised to approach monitoring wells from the upwind side, remove the cap and allow the well to vent momentarily prior to sampling. Keep breathing zone to the upwind side of wells during bailing activities.

BENZENE

Permissible Exposure Limit
1 ppm OSHA PEL
5 ppm OSHA 10 min Ceiling
0.5 ppm OSHA Action Level

Benzene is a central nervous system depressant and an eye and skin irritant. Poisoning may cause hemorrhages and immunosuppression. A relationship has been discovered between benzene exposure and leukemia. Benzene is regulated as an occupational carcinogen. Acute exposure may cause dizziness, excitation, weakness, headache, giddiness, breathlessness and chest constriction.

TOLUENE

Permissible Exposure Limit

50 ppm ACGIH TLV
(Skin Absorbable)

Toluene is an eye, skin and mucous membrane irritant and a central nervous system depressant. Poisoning may affect the liver and kidneys. Prolonged exposure may affect the heart and blood. The ingestion of alcoholic beverages may enhance the toxic effects of toluene. Symptoms of exposure include respiratory tract irritation, headache, dizziness and eye irritation. Toluene may be absorbed to the bloodstream via skin contact.

ETHYL BENZENE

Permissible Exposure Limit
100 ppm OSHA PEL

Ethyl benzene is a skin, eye and mucous membrane irritant. It is moderately toxic by ingestion and slightly toxic by skin absorption. Ethyl benzene is a central nervous system depressant. Poisoning may affect the liver. Symptoms of exposure may include a sense of chest constriction and nervous disorders. Skin contact may result in first and second degree burns. The odor can be detected at 140 ppm ant irritation occurs at 200 ppm.

XYLENE

Permissible Exposure Limit
100 ppm OSHA PEL

Xylene is a mild eye and mucous membrane irritant, primary skin irritant and a central nervous system depressant. Ingestion causes severe gastrointestinal upset and creates an aspiration hazard. Chronic inhalation results in symptoms that resemble acute poisoning, but are more severe systemically.

GASOLINE

Permissible Exposure Limit
300 ppm ACGIH TLV

Gasoline is irritating to the skin, eyes and mucous membranes. Dermatitis may result from prolonged contact with the liquid. Gasoline acts as a central nervous system depressant. Exposure may cause staggering gait, slurred speech and mental confusion. Gasoline exposure may affect the liver, kidneys and spleen. Absorption of alkyl lead antiknock compounds contained in many gasolines poses an additional health concern, especially where there is prolonged skin contact.

DIESEL FUEL (No. 2-D)

Permissible Exposure Limit
400 ppm OSHA PEL (As petroleum distillates/naphtha)

Diesel fuel is a skin and mucous membrane irritant and a central nervous system depressant. Poisoning may affect the liver and kidneys. Skin contact may result in drying and cracking of the skin.

FUEL OIL (No. 6)

Permissible Exposure Limit
400 ppm OSHA PEL (as petroleum distillates/naphtha)
0.2 mg/m^3 OSHA PEL (Coal Tar Pitch Volatiles, "PNA's")

Fuel oil No. 6, or "Bunker Fuel", may be irritating to the eyes and skin. Poisoning may affect the liver, kidneys and digestive system. This substance is likely to contain polynuclear aromatic hydrocarbons (PNA's), some of which are considered carcinogenic. PNA's present a skin contact hazard. Avoid skin contact with potentially contaminated site materials.

7.2 Physical Hazards

Activities to be performed on site may involve drilling equipment and materials. Personnel should be aware that as personal protective equipment increases, dexterity and visibility may be impacted and performing some tasks may be more difficult. Tape all loose protective clothing to avoid entanglement in rotating equipment. Before drilling proceeds, underground utilities must be located and marked. Other drilling safety precautions to be observed during this assessment include the following:

- All personnel working around drill rigs will be familiarized with emergency shut-down procedures and the position of "kill" switches.

- No loose fitting clothing, jewelry or unsecured long hair is permitted near the rig.

- Keep hands and feet away from all moving parts while drilling is in progress. Shovel auger cuttings with long handled shovel. *DO NOT* use hands or feet.

- Daily inspection of all ropes, cables and moving parts is mandatory.

- A first aid kit and fire extinguisher will be immediately available at all times.

- All drill crews shall consist of at least two persons.

- No drilling is permitted during impeding electrical storms, tornadoes or when rain creates a hazardous work environment.

- A minimum horizontal and vertical clearance distance of **10 feet** must be maintained between the drill rig and overhead power lines; use spotters to help rig operator maneuver the vehicle when near overhead power lines.

  Other physical hazards which may be present on this project site include:

- Back injuries due to improper lifting - Use proper lifting techniques. Lift with the legs, not the back. Keep loads close to the body and avoid twisting. Loads heavier than 50 pounds (lbs) require a second person or mechanical device for lifting. Use mechanical devices such as drum dollies, hand trucks, and tool hoists (for lifting augers) to lift or move heavy loads whenever possible.

- Ergonomic Stress - Lift carefully with load close to body with the legs taking most of the weight. Get help with lifts greater than 40 lbs. When working with a heavy tool or object, keep legs under the load and do not overreach or twist to the side. Reposition body to be more square to the load and work. Push loads, rather than pull, whenever feasible. Do not persist with lifting when the load is too heavy. Use a mechanical lifting aid or have a coworker assist with the lift. Rotate repetitive tasks to avoid soft-tissue fatigue.

- Falls From Elevated Surfaces - Protect employees from falling off surfaces that have a side or an edge that is 6 ft or more above a lower level. Provide a safety harness and shock-absorbing lifeline or adequate fall protection where applicable. Employees must wear them when working 6 ft or higher above the platform or main work deck. Install either a guardrail system or fall arrest system that conforms to 29 CFR 1926.502 (d) and is approved by the American National Standards Institute.

- Fire and Explosion - Make ABC fire extinguishers accessible in the work area. Store flammables in Underwriter's Laboratory and Occupational Safety and Health Administration (OSHA) approved metal safety cans equipped with spark arrestors. Store flammable containers more than 50 ft from possible ignition sources. Keep exhaust equipment powered by internal combustion engines well away from flammables and combustibles. Secure hot work permits/approvals before welding or cutting. Store and use compressed gases in a safe manner. Never refuel equipment (e.g., generators) while it is in operation or hot enough to ignite fuel vapors. Conspicuously mark operations that pose fire hazards "No Smoking" or "Open Flames." Remove trash, weeds, and unnecessary combustibles from the Exclusion Zone (EZ). Transfer of potentially flammable liquids will be conducted with intrinsically safe pumping equipment. Drums will be bonded and grounded prior to transfer of potentially flammable liquids.

- Vehicles - Obey all site traffic signs and speed limits. Seat belts must be functional and in use during operation of any site vehicles (including rentals). Operator shall regularly inspect the vehicle for defective parts, such as brakes, controls, motor, chassis and drives. Always be aware and stay alert to traffic around the work area.

- Inclement Weather – The project may be shutdown by the SSO during the following inclement weather conditions: poor visibility; precipitation severe enough to impair safe movement or travel; lightning in the immediate area; steady winds in excess of 40 mph; or, other conditions as determined by the SSO or Corporate Safety and Health Manager. Work will resume when the conditions are deemed safe by the SSO.

- Noise - Wear hearing protection when speech becomes difficult to understand at a distance of 10 ft and while standing within 20 to 25 ft from heavy equipment, pneumatic power tools, steam cleaners, and other equipment in operation that can generate more than 85 decibels (A-weighted scale) (dBA).

- Slips, Trips, and Falls - Clear work area of obstructions and debris before setting up. Alter work areas as necessary to provide a safe, reasonably level area. All walking and working surfaces shall continually be inspected and maintained to be free of slip, trip, and fall hazards. Keep platforms, stairs, and immediate work areas clear. Do not allow oil, grease, or excessive mud to accumulate in these areas. Eliminate slip, trip, and fall hazards or identify them clearly with caution tape, barricades, or equivalent means. Store loose or light material and debris in designated areas or containers. Secure tools, materials, and equipment subject to displacement or falling.

- Traffic Control - If site activities interrupt the normal flow of pedestrian or vehicular traffic, barricades and warning signs which comply with the Manual on Uniform Traffic Control Devices and/or State or local ordinances will be erected around affected equipment. Safety orange work vests will be worn by personnel working within 10 feet of any active roadway. All borings or partially completed groundwater monitoring wells will be adequately covered and/or barricaded if left unattended for any period of time.

8.0 SITE CONTROL

An Exclusion Zone, Contaminant Reduction Zone and a Support Zone will be established whenever project activities require Level C or Level B personal protective equipment. Defined access and egress points will be established and personnel will enter only through those points.

As permitted by site topography, the area within a 50 foot radius of a drill rig and 100 foot radius of UST removal excavation shall be considered the Exclusion Zone. Only those personnel designated by the Project Manager/SSO are allowed to enter the Exclusion Zone. Where practical, or where their use will prevent public injury, temporary signs or barricade fencing will be established to define the Exclusion Zone. ABSOLUTELY NO SMOKING WILL BE PERMITTED WITHIN THE EXCLUSION OR CONTAMINANT REDUCTION ZONES ON ANY PETROLEUM CONTAMINATED SITE.

If unauthorized personnel attempt to enter the exclusion zone, the SSO will verbally inform the individual(s) to leave the project site. If unauthorized individuals refuse to leave the Exclusion Zone or are considered in danger or pose danger to project personnel, the SSO will cease project activities (i.e., shut down drill rigs, excavation equipment, etc.) and notify the client representative or the local police of the situation. Site activities will not resume until unauthorized personnel have left the project site.

9.0 AIR MONITORING AND SITE ACTION LEVELS

This air monitoring protocol is designed to prevent personnel exposure to airborne contaminants in excess of established permissible exposure limits. The results of field air monitoring will be used to determine the continued adequacy of initial personal protective equipment.

Air monitoring equipment required for petroleum contaminated sites will include the following:

- **Photoionization Detector**

Task Leader(s) will be knowledgeable in the operation of the photoionization detector. A manual on the operation of the PID and the appropriate calibration kit will be mobilized to the project site with the instrument. Photoionization detectors will be calibrated under field conditions *each day* prior to use. Task Leaders are instructed to consult the manufacturer's specifications for appropriate calibration gas and calibration techniques.

A photoionization detector (PID) will be used to determine approximate hydrocarbon vapor concentrations in the BREATHING ZONE of site personnel. Continuous breathing zone air monitoring will be conducted during initial phases of intrusive activities (i.e., boring, excavation). If PID readings are less than 10 ppm, monitoring may be conducted at intervals of 10 minutes. If initial PID readings exceed 10 ppm, or if hydrocarbon odors become evident upon during auger advancement, continuous breathing zone air monitoring will be conducted..

If sustained PID readings in the breathing zone exceed 25 ppm, personnel will upgrade to respiratory protection as outlined below. Personnel will remain in air purifying respirators until the photoionization detector readings in the breathing zone have fallen and stabilized below 25 ppm.

9.1 Site Action Levels

Instrument	Level D/D Mod	Level C	Site Evacuation
PID	**< 25 ppm**	**> 25 ppm**	**> 300 ppm**

The Action Levels indicated above are for air in the breathing zone and NOT applicable to vapor above containerized soil samples. The Action Levels are established to prevent exposure to airborne petroleum hydrocarbon vapors in excess of established exposure limits. Although the Action Levels indicated for Site Evacuation are within the protective capacity of the respirator cartridges specified below, personnel will evacuate to the UPWIND side of the site if the continuous breathing zone vapor concentrations exceed these limits. The SSO will contact the Corporate Safety and Health Manager for discussion and re-evaluation of personal protective equipment and air monitoring requirements if airborne contamination exceeds Site Evacuation Action Levels. In the event that site evacuation is required, a modification of this safety and health plan will be issued with contingencies for combustible gas monitoring and upgrading to Level B personal protective equipment.

THIS PLAN IS NOT VALID FOR LEVEL B SITE ACTIVITIES.

10.0 PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

The air monitoring regimen identified above will allow initial project activity to begin in **LEVEL D** personal protective equipment to include:

- **Hard Hat**
- **Chemically Protective Safety Boots (Hazmax, other as approved by S&H Mgr.)**

- **Nitrile, Neoprene Rubber or Silver Shield Outer Gloves**
- **Nitrile or Latex Inner Liners**
- **Safety Eye Wear (ANSI Z-87 approved)**
- **Hearing Protection (if within 10 feet of drill rigs, concrete coring or other equipment which impairs normal conversation at < 5 feet.)**

If petroleum saturated soils and potential splashing conditions develop during the course of the assessment, personnel will upgrade to **LEVEL D MODIFIED** personal protective equipment. Level D Modified personal protective equipment ensemble consists of the above, plus:

- **Polylaminated Tyvek Coveralls**
- **Tape Sleeves/Legs to Gloves and Boots**

If air monitoring exceeds Action Level specified for upgrade to **LEVEL C** personal protective equipment, personnel will don:

- **Full Face Air Purifying Respirator**
- **Equipped with Combination Organic Vapor/Acid Gas/HEPA Cartridges**

11.0 DECONTAMINATION

Equipment decontamination is necessary on all petroleum hydrocarbon sites. Personnel decontamination for projects below personal protective Level C will consist of washing off safety footwear, proper cleaning or disposal of outer and inner gloves and thorough washing of face, arms and hands. A full body shower will be required as soon as possible upon leaving the project site. For projects involving Level C personal protective equipment, a decontamination station will be established and the following procedures enforced.

11.1 Personal Decontamination

Personnel will establish a decontamination station on the interface of the Exclusion Zone. A Contaminant Reduction Zone will be established and will extend 10 feet beyond from the decontamination station.

- Two Wash Tubs
- Scrub Brush
- Plastic Bags
- Water and Alconox Detergent

The wash tub on the exclusion zone side of the site will contain a solution of water and Alconox detergent; the second wash tub will contain clean rinse water. Personnel decontamination will

consist primarily of detergent washing and rinsing of reusable exterior protective gear. Coveralls will be removed by turning the clothing inside out.

Personnel may not leave the contaminant reduction zone without proceeding through the decontamination sequence described below. Decontamination station will consist of:

- Wash work gloves, boots and polylaminated protective coveralls,
- Rinse work gloves, boots and coveralls,
- Remove tape at wrists and ankles,
- Remove protective coveralls,
- Remove respirator
- Dispose of spent cartridges; wash and rinse respirator
- Remove outer gloves
- Remove inner gloves

Expendable personal protective equipment will be placed in plastic trash bags, sealed and disposed of per client agreement. Decontamination solutions will be containerized or disposed of as arranged by Project Manager.

11.2 Equipment Decontamination

Decontamination of equipment will be performed to limit the migration of contaminants off-site. All equipment will be cleaned prior to site entry to remove grease, oil and encrusted soil.

Decontamination of large equipment will consist of physically removing gross contamination with shovels, brushes etc. followed by detergent and water high pressure wash with a clean water rinse. The Project Manager is responsible for determining if decontamination solutions must be containerized. If so, a decontamination sump or polyethylene sheeting and fluid containers will be mobilized and established in the decontamination area. Decontamination of hand samplers and similar small equipment will be performed at a designated location within the Contaminant Reduction Zone. Decontamination of such equipment will consist of detergent solution wash and clean water rinse.

12.0 SITE COMMUNICATIONS

Communication between personnel within the Exclusion Zone will be via verbal communication or hand signals. Visual contact between members of task teams should be possible throughout the course of project activities. Contact with the SSO will be through direct verbal communication. The following hand signals will be used by personnel wherever respiratory protection and/or equipment noise limit verbal communication.

Signal	Meaning
Thumbs Up	OK, all is well
Grab throat with both hands	Can't breathe
Shake head, thumbs down	NO, negative
Point right (when facing equipment operator)	Move/steer left
Point left when facing equipment operator)	Move/steer right
Grab partner's wrist	Leave area immediately

13.0 EMERGENCY RESPONSE PROCEDURES

The Project Manager is responsible for obtaining and recording the following emergency information prior to site mobilization:

Location of Nearest Telephone:

Nearest Hospital/Clinic: Espanola Hospital Phone: 505-753-7111

Estimated Drive Time: 8 minutes

Directions From Site: (ATTACH SITE DIAGRAM) Riverside south to Fairview west to Hwy 285 south to Spruce St. west to hospital

Ambulance:	**911**
Fire Department:	**911**
Police:	**911**
Poison Control Center:	**1-800-222-1222**
Project Manager:	**Mark Hillier 505-797-4287**
Safety and Health Manager:	**(913) 599-6886**
Client Contact:	**Mark Hillier 505-797-4287**

13.1 Personal Injury

The SSO and at least one other individual on site will be appropriately trained to administer first aid. A certificate issued by the American Red Cross, National Safety Council or equivalent will be considered acceptable.

For minor injuries, such as cuts, burns, exhaustion, heat cramps, insect stings, etc., the affected employee will be removed to an uncontaminated area. The SSO or other designated employee trained in first aid procedures will administer appropriate first aid. If the injury warrants additional

medical attention, the affected employee will be properly decontaminated and transported to the nearest hospital or emergency medical facility.

For more serious injuries the Site Safety Officer or designee will summon an ambulance to the project site. No attempt will be made by Terracon personnel to move the victim, without the aid and/or instructions of qualified medical personnel.

Where air monitoring indicates the absence of toxic gases or vapors, the ambulance will be directed to the affected employee. If site conditions warrant and as time permits, the wheels of the ambulance will be decontaminated with high pressure wash. The SSO or designee will accompany the ambulance to the medical facility, and provide guidance concerning additional decontamination which may be required for the injured employee, ambulance or attendants.

Whenever an injury occurs on sites with contamination requiring personal protective equipment greater than Level D modified, a minimum of two employees will don appropriate equipment and proceed to the victim. An ambulance will be called immediately. If the extent of injuries permit, the injured employee will be removed to fresh air. Appropriate first aid will be administered.

If rescuer(s) assess that the victim cannot be removed without a stretcher or other specialized equipment, the victim will be removed at the earliest possible moment by appropriately attired Terracon personnel with the direction and/or assistance of qualified medical response personnel. The injured employee will be immediately decontaminated and transported to the nearest medical facility. A crew member designated by the SSO will inform the ambulance crew of contaminants of concern and provide assistance with additional decontamination if required.

13.2 Evacuation and Shutdown Procedures

The SSO will establish and notify site personnel of emergency "rally" points. In the event of a site emergency, personnel will immediately exit the site and assemble at the designated rally point. Evacuation routes will be dependent on site topography and wind conditions. The routes will be selected and presented by the SSO daily prior to site activity.

If emergency evacuation becomes necessary, the SSO will sound the emergency alarm (e.g. support vehicle horn or compressed air horn). Personnel will safely shutdown all electrical and mechanical equipment and quickly proceed to closest designated rally point. The SSO will then account for each crew member on site.

In the event that a Terracon employee does not report to the designated rally point within 5 minutes of the evacuation alarm, the SSO will perform an immediate assessment of site conditions. If site conditions do not pose an immediate hazard to life or health, the SSO will initiate search and rescue efforts utilizing two crew members attired in appropriate personal protective equipment.

14.0 HEAT STRESS

14.1 Level D/D Modified PPE

Whenever ambient temperature exceeds 70 degrees F and personal protective equipment requirements are Level D or Level D modified, the following heat stress monitoring and preventive measures will be implemented.

At least one gallon of water will be available for each field employee during each day of site activity. The designated Site Safety Officer and one designee will observe personnel for signs of heat stress (excessive perspiration, flushed skin, nausea, etc.).

If such signs are observed, affected workers will be required to leave the contaminant zone, loosen protective clothing and rest. During the rest period affected personnel will drink at least one 8 oz. glass of cool water. Pulse will be checked at the beginning of the rest period. Personnel will not return to work until pulse rate is less than 90.

14.2 Level C, B or A PPE

In addition to the above precautions, the following procedures will be implemented whenever the ambient temperature exceed 70 degrees F and personal protective equipment requirements are Level C or above. Ambient temperature will be measured with a dry bulb thermometer and percent cloud cover will be estimated:

1.0 = No Clouds
0.75 = 25% Clouds
0.5 = 50% Clouds
0.25 = 75% Clouds
0.0 = 100% Clouds).

Calculate the adjusted temperature using the following formula:

ADJUSTED TEMPERATURE = 13(% CLOUD COVER) + DRY TEMPERATURE

Rest regimens and physiological monitoring (oral temperature and radial pulse) will be implemented at frequencies dependent upon adjusted temperature.

Adjusted Temperature	Rest Period/Monitoring Frequency
90+	After 15 minutes
87.5-90	After 30 minutes
82.5-87.4	After 60 minutes
77.5-82.5	After 90 minutes
70.5-77.4	After 120 minutes

Employees will return to work only after oral temperature is below 99.7 degrees F and pulse rate < 90. Fluid replacement will be encouraged during each rest period. The use of stimulants and alcoholic beverages in off hours will be discouraged.

15.0 COLD STRESS

Persons working outdoors in low temperatures, especially at or below freezing are subject to cold stress. Exposure to extreme cold for a short time can cause severe injury to the surface of

the body or result in profound generalized cooling which, in extreme cases, can lead to coma and death. Areas of the body which have high surface area, such as fingers, toes and ears are most susceptible.

Protective clothing generally does not provide protection against cold stress. In many instances it may increase susceptibility due to excessive perspiration which can rapidly cool the body when exposed to cold, windy conditions. The greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. And, because water conducts heat approximately 240 times faster than air, the body will cool rapidly when chemical protective equipment is removed if undergarments are saturated with perspiration.

Whenever ambient temperatures are expected to be below freezing, Terracon personnel will consult the cold stress section of the Terracon Safety and Health Policy and Procedures Manual to re-familiarize themselves with signs, symptoms and treatment of cold injuries. Thermal boot, glove and hard hat liners will be mandatory for all personnel conducting field activities in ambient temperatures below freezing.

ACKNOWLEDGMENT OF INSTRUCTION

All Terracon personnel are required to sign the following acknowledgment of instruction form prior to conducting project activities. This acknowledgment is not a waiver. It is the primary method used in compiling environmental experience and contaminant exposure records for Terracon personnel. Upon written request, a copy of your environmental work record will be provided by the Corporate Safety and Health Manager.

I understand that this project involves the investigation of a project site with potential petroleum hydrocarbon contamination. I have read this Safety and Health Plan and have received instructions for safe work practices, personal protective equipment and air monitoring requirements. I further understand that if I encounter unanticipated contamination I am to leave the site and immediately notify the Project Manager and Corporate Safety and Health Manager of conditions discovered.

PROJECT NAME: Fairview Station

TERRACON JOB #: 66127029.1

Name (Please Print)	Signature	Date
Mark Hillier		10/23/13
~~Julie Smith~~		
Christian Ortiz		10/23/13
Hart Cory		10/23/13
Susan von Gonten		10/23/13

PERSONAL PROTECTIVE EQUIPMENT UTILIZED:

__X__ **LEVEL D** _____ **LEVEL D MOD.** ____ **LEVEL C**

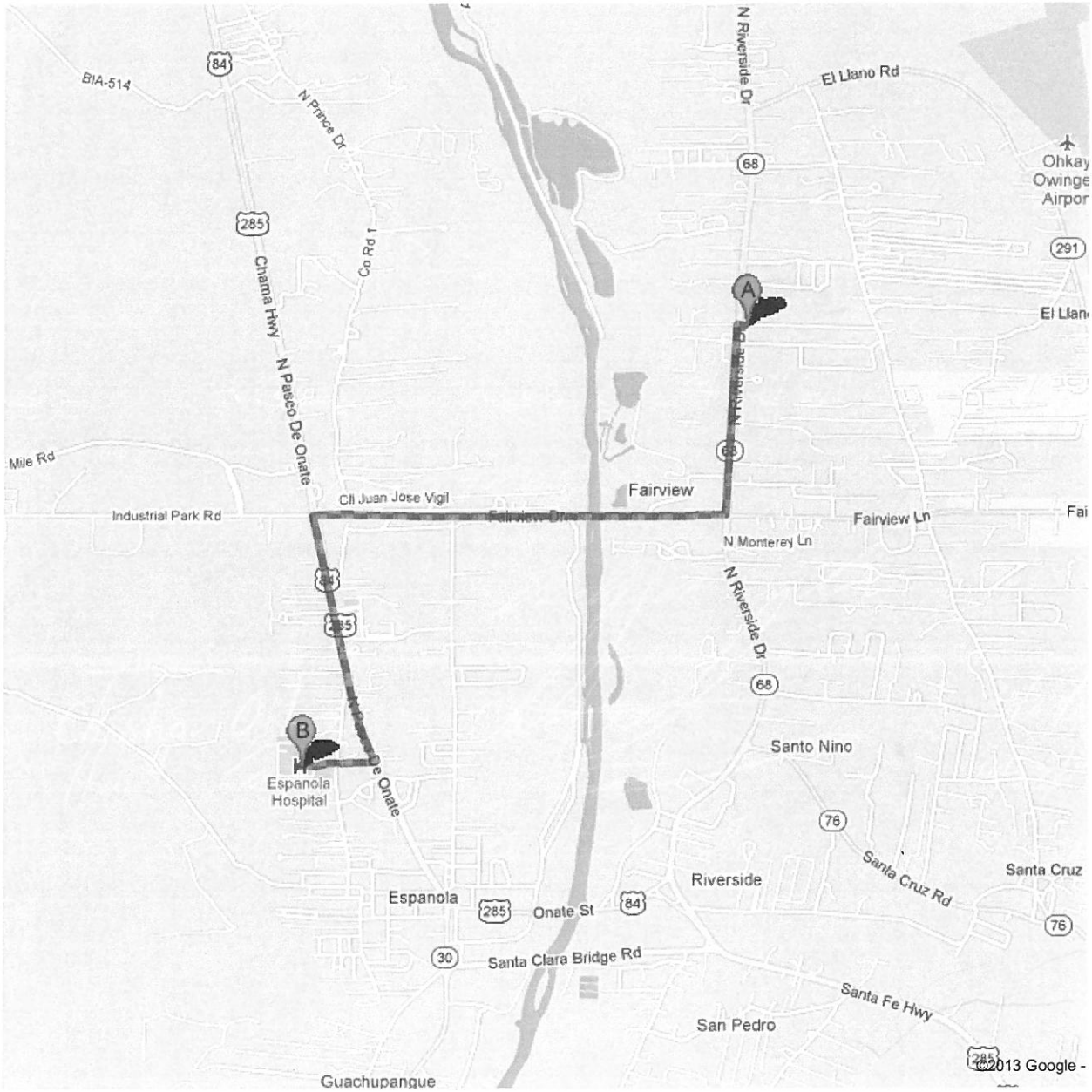
Safety briefing performed by: Mark Hillier Date: ~~1/31/13~~ 10/23/13

PETROLEUM CONTAMINANT(S):_____ _____ _____

AIR MONITORING RESULTS (Attach separate page if required.)

Google

Directions to Espanola Hospital
Espanola, NM
2.9 mi – about **8 mins**



A Cll Ranchitos

	1. Head **west** on **Cll Ranchitos** toward **N Riverside Dr**	go 131 ft total 131 ft
	2. Take the 1st left onto **N Riverside Dr** About 2 mins	go 0.6 mi total 0.6 mi
	3. Turn right onto **Fairview Dr** About 2 mins	go 1.3 mi total 1.9 mi
	4. Turn left onto **N Paseo De Onate** About 2 mins	go 0.8 mi total 2.7 mi
	5. Turn right onto **Spruce St** Destination will be on the right About 56 secs	go 0.2 mi total 2.9 mi

B **Espanola Hospital**
Espanola, NM

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.