Minimum Site Assessment

Fairview Station

1626 N. Riverside Drive

Española, Rio Arriba County, New Mexico

March 12, 2013

Terracon Project No. 66127029

Prepared for:

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

Albuquerque, New Mexico

Prepared by:

Terracon Consultants, Inc.

Albuquerque, New Mexico

March 12, 2013

Terracon

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

P: (972) 284-6655

Re: 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. # 16613
Terracon Project No. 66127029

Dear Ms. Roybal:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Minimum Site Assessment (MSA) report for the above referenced site. This investigation was performed in accordance with Terracon's Proposal Number P6612-0260 dated October 26, 2012 and your authorization to proceed dated October 29, 2012.

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

for Daniel F. Schneider, C.H.M.M.
Senior Associate

Attachments

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APPENDICES

MINIMUM SITE ASSESSMENT
FORMER FAIRVIEW STATION
1626 N. RIVERSIDE DRIVE
ESPAÑOLA, RIO ARRIBA COUNTY, NEW MEXICO

Facility I.D. # - 28779 Release I.D. # - 4657 Work Plan I.D. # - 16613

Terracon Project No. 66127029

March 12, 2013

EXECUTIVE SUMMARY

The Former Fairview Station (the Site) is located at 1626 N. Riverside Drive, Española, Rio Arriba County, New Mexico. The Site was initially developed as a gas station in the 1970s. At that time, two underground storage tanks (USTs) were apparently installed at the site; however, the location of the USTs and associated dispensers could not be confirmed. According to New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) records, these USTs were removed from the site and were replaced with one 10,000-gallon gasoline and two 8,000-gallon gasoline USTs in August 1989. The USTs were located in the north-central portion of the site and the four associated dispensers were located southwest of the UST hold. This UST system was removed from the site in July 2012 and stained soils and petroleum odors were observed during the removal. Based on the results of soil samples collected during the UST removal, the NMED PSTB confirmed a release on August 6, 2012.

Terracon subcontracted the installation of soil borings and monitoring wells as part of this Minimum Site Assessment (MSA) 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) by a New Mexico licensed water well driller. 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.

Soil samples were collected from each soil boring from the interval exhibiting the highest field evidence of environmental impact. One groundwater sample was collected from monitoring well MW-1; however, groundwater samples were not collected from monitoring wells MW-2 or MW-3 based on the presence of phase-separate hydrocarbons (PSH) in these two 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) and 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 B-1, B-2, B-3 and B-4 have been affected by a release of unleaded gasoline and exhibit concentrations of BTEX, MTBE and/or naphthalene at concentrations exceeding NMED Tier 1 Soil Concentrations Protective of Groundwater dated March 13, 2000. In addition, a groundwater sample collected from monitoring well MW-1 exhibited concentrations of BTEX, MTBE, EDC,

naphthalene and 1-methylnaphthalene exceeding Water Quality Control Commission standards dated March 13, 2000.

Based on the results of this MSA, Terracon recommends the completion of a compliance determination for the current site owner, the installation of additional monitoring wells to delineate the horizontal and vertical extent of groundwater exceeding WQCC standards, interim removal of PSH from the on-site monitoring wells, and an evaluation of the affected aquifer for the recoverability of PSH.

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 gasoline USTs 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 MSA Work Plan.
- January 31, 2012 – Terracon mobilizes to the site to conduct MSA field activities.
- March 8, 2012 – Terracon submits this MSA 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 B.

2.2 Description of UST System

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 B. 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. In addition, groundwater elevation data collected from the three monitoring wells installed at the site indicates that the gradient at the site is relatively flat with a gradient toward the west of approximately 0.004 ft./ft.

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.

PSH was detected in each of the three on-site monitoring wells at thicknesses ranging from 0.34 feet to 5.45 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 PSH 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 PSH thickness) were measured at depths of approximately 14 feet bgs on February 27, 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 MSA. 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 Water Well Survey

Terracon conducted a review of water supply wells within a 1,000 foot radius of the site based on information obtained from the New Mexico Office of the State Engineer (OSE) website. Based on our review of the OSE database, one well with log information and four wells without well log information were identified within 1,000 feet of the site. Three of the wells without log information (RG 93769 POD 1-3) correspond to the monitoring wells installed at the site as part of this MSA. The closest well, RG 10466 S, is located approximately 300 feet south of the site and is designated as a subdivision well. Based on this designation, well RG 10466 S may meet the qualifications as a public supply well. A map depicting the locations of the two off-site water wells located within a 1,000-foot radius of the site is provided as Exhibit 10 in Appendix B.

The City of Española obtains potable water from four groundwater wells located in the northeast portion of the city. These public supply wells are located on the west side of the Rio Grande. One of these wells, RG 03067 S15, is located within a one-mile radius of the site. The city provides potable water to the community through a network of supply pipes. Terracon conducted a review of public supply wells within a one-mile radius of the site based on information obtained from the New Mexico Office of the State Engineer (OSE) website. Based on the OSE database information, 51 water wells are located within a one-mile radius of the site. Of these 51 water wells, one well (RG 03067 S15) is a public supply well for the City of Española, two wells are designated as water wells for multiple domestic households (RG 76868 and RG 52608) and one well, (RG 01466) is designated as a water well for a subdivision. An additional well (RG 84054) does not have a designated use in the OSE database. These five water wells may meet the qualifications as a public supply well. The designations for the remaining water wells do not correspond to potential public supply well designations. A map depicting the locations of the three potential public supply wells within a one-mile radius of the site is provided as Exhibit 11 in Appendix B. Information obtained from the OSE database for all wells within a one-mile radius of the site follows Exhibit 11.

Based on the absence of a current delineation of the groundwater impacted by the on-site release, it is currently unknown if the identified water wells have been affected by the on-site release. However, based on the distances of at least 300 feet from the site to the well locations and their respective locations hydrogeologically cross- to up-gradient positions relative to the site, it is Terracon's opinion that the likelihood that the identified wells have been affected is low.

3.2 Receptor Survey

Terracon conducted a visual assessment of properties within a 1,000-foot radius of the site for indications of potential sensitive receptors. With the exception of potentially affected buried utility conduits, sensitive receptors were not identified. A map depicting the locations of buried utilities adjoining the site is provided as Exhibit 4 in Appendix B and a map depicting the land use within 1,000-feet of the site is provided as Exhibit 12 in Appendix B.

3.3 Surface Waters

Surface water bodies were not identified within a 500-foot radius of the site. The nearest surface water body is an unnamed tributary of the Rio Grande approximately 1,300 feet west of the site.

3.4 Soil Assessment

Terracon's field activities were conducted on January 31, 2013 and February 1, 2013. Buried utilities were located in accordance with state regulations prior to drilling activities. In addition, well permits were obtained from the OSE prior to monitor well installation. In accordance with the approved Work Plan, soil boring B-1 was advanced in the northeast portion of the former UST hold, soil boring B-2 was advanced adjacent to the former location of the northeast dispenser, soil boring B-3 was advanced approximately 20 feet south of the southern dispensers, soil boring B-4 was advanced along the northern site boundary, and soil boring B-5 was advanced approximately 10 feet southeast of the on-site building. Exhibit 3 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 impairment. 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;
- 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 termini of the borings at 28 feet bgs.

Detailed lithologic descriptions are presented on the soil boring logs included in Appendix C. A cross-section depicting the soils encountered at the site is included as Exhibit 6 in Appendix B.

3.4.1 Soil Extent of 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 B-4, exhibiting the highest gasoline range organics (GRO) and diesel range organics (GRO) TPH result 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. Soil sample intervals for each boring are presented in the table of soil sample analytical results (Table 1) in Appendix E and on the lithologic boring logs included in Appendix C.

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 B-1, B-2, B-3 and B-4 exhibited concentrations of BTEX exceeding the Tier 1 Soil Concentrations Protective of Groundwater (SCPGs). In addition, the soil samples collected from soil borings B-2, B-3 and B-4 exhibited concentrations of MTBE exceeding the applicable Tier 1 SCPG and the soil sample collected from soil boring B-4 exhibited a naphthalene concentration exceeding the applicable Tier 1 SCPG. In addition, the detection limits for EDB and EDC were above the applicable Tier 1 SCPGs in each of the samples analyzed and the detection limit for MTBE and benzene for the soil sample collected from soil boring B-5 were above the applicable Tier 1 SCPGs. Based on the absence of detections of additional PAH constituents exceeding the Tier 1 SCPGs in the soil sample collected from soil boring B-4, which exhibited the highest TPH DRO concentration, significant releases of diesel do not appear to have been occurred at the site. Based on the absence of an elevated lead concentration in the soil sample collected from soil boring B-4, which exhibited the highest TPH GRO concentration, significant releases of leaded gasoline do not appear to have occurred at the site. Soil sample laboratory results are summarized in Table 1 included in Appendix E. The executed chain-of-custody form and laboratory data sheets are provided in Appendix F. A soil concentration map is provided as Exhibit 7 in Appendix B.

In addition to the samples collected for analysis of petroleum related constituents, one soil sample was collected from soil boring B-5 from 18-19 feet bgs for analysis of fraction organic carbon. This soil sample exhibited a fraction organic carbon content of less than 0.10%.

Based on the results of soil analyses, the extent of soil contamination exceeding Tier 1 SCPGs has not been fully delineated.

3.5 Groundwater Assessment

Subsequent to advancement, soil borings B-1, B-2 and B-3 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 three 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 B. Monitoring well construction details are presented on the soil boring logs for these monitoring wells and are included in Appendix C. The depth to groundwater measurements and PSH thickness data are presented in Table 3 in Appendix E.

Subsequent to installation, each monitoring well was gauged with an interface meter to evaluate the presence of PSH. PSH was identified in monitoring wells MW-2 and MW-3 and based on the presence of PSH; these monitoring wells were not developed. Monitoring well MW-1 developed by surging and removing groundwater with a new, disposable, polyethylene bailer until the groundwater was relatively free of fine-grained sediment. Approximately 25 gallons of groundwater were removed from monitoring well MW-1 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 February 4, 2013, monitoring well MW-1 was purged by removing three well volumes of water with a new disposable bailer prior to sampling. Subsequent to purging, a groundwater sample was collected from monitoring well MW-1 using a new disposable polyethylene bailer. Subsequent to sufficient recharge, one groundwater sample was collected from each monitoring well utilizing a new, disposable, polyethylene bailer. The groundwater sample was 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.

On February 1, 2013, approximately 4.5 gallons of PSH was removed from monitoring well MW-2 and approximately 0.5 gallon of PSH was removed from monitoring well MW-3. On February 4, 2013, approximately five gallons of PSH was removed from monitoring well MW-2 and approximately two gallons of PSH was removed from monitoring well MW-3. The PSH was placed in a 55-gallon drum, which was labeled and staged on site.

3.5.1 Groundwater Extent of Contamination

Based on the results of laboratory analyses, the groundwater sample collected from monitoring well MW-1 exhibited concentrations of BTEX, MTBE, EDC, naphthalene and 1-methylnaphthalene exceeding New Mexico Water Quality Control Commission (WQCC) standards. In addition, the detection limit for EDB was above the WQCC standard. Groundwater sample laboratory results are summarized in Table 2 included in Appendix E. The executed chain-of-custody form and laboratory data sheets are provided in Appendix F. A groundwater concentration map is provided as Exhibit 8 in Appendix B.

Based on depth to groundwater data and PSH thickness data collected from the three 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 west-northwest at a gradient of 0.004 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 PSH 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 PSH thickness) were measured at depths of approximately 14 feet bgs on February 27, 2013. A groundwater gradient map is provided as Exhibit 4 in Appendix B.

Based on the WQCC standard exceedances in the groundwater sample collected from monitoring well MW-1 and the presence of PSH in monitoring wells MW-2 and MW-3, the extent of groundwater contamination exceeding WQCC standards has not been defined.

4.0 AMENDMENTS / UNANTICIPATED SITE CONDITIONS

Unanticipated site conditions, beyond the presence of PSH, were not encountered during Terracon's assessment activities. PSH detected in monitoring wells MW-2 and MW-3 was removed by hand bailing as detailed in Section 3.5 above.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Five soil borings (B-1, B-2, B-3, B-4 and B-5) were advanced at the Fairview Station facility located at 1626 N. Riverside Drive in Española, Rio Arriba County, New Mexico. Soil borings B-1, B-2 and B-3 were converted to permanent two-inch diameter monitoring wells MW-1, MW-2 and MW-3, respectively.

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

- The on-site soils in the vicinity of soil borings B-1, B-2, B-3 and B-4 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 is approximately 15 feet bgs with a gradient of 0.004 ft./ft. toward the west-northwest.
- A groundwater sample collected from monitoring well MW-1 exhibited concentrations of BTEX, MTBE, EDC, naphthalene and 1-methylnaphthalene exceeding WQCC standards.
- Approximately 0.34 foot of PSH was encountered in monitoring well MW-1 subsequent to sampling, approximately 5.45 feet of PSH was encountered in monitoring well MW-2, and approximately 2.89 feet of PSH was encountered in monitoring well MW-3 during gauging activities on February 27, 2013.
- Based on the results of Terracon's receptor survey, buried utilities adjoining the site may be affected by the release. Land use within a 1,000-foot radius of the site is primarily commercial and residential with areas of institutional, agricultural and undeveloped land.

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

- The completion of a compliance determination for the current site owner
- The installation of additional monitoring wells to delineate the horizontal and vertical extent of groundwater exhibiting WQCC standard exceedances
- Interim removal of PSH from the on-site monitoring wells
- An evaluation of the affected aquifer for the recoverability of PSH

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, 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

Signature:_____ for

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

NMED Investigation Report Forms

Investigation Report Forms

Risk-Based Decision

Making For Petroleum

Releases At

Underground Storage

Tank Sites

In New Mexico

SITE NAME:	***Fairview Station***
SITE LOCATION:	***1626 N. Riverside Drive, Espanola, NM***
SITE ID:	***4657***
FACILITY ID:	***28779***
SUBMITTAL DATE:	***March 12, 2013***
PREPARED BY:	***Mark R. Hillier - Terracon Consultants, Inc.***
REVIEWED BY:	***Daniel F. Schneider - Terracon Consultants, Inc.***

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☐ *Check the box against the item, if the item is included.*

Form No.	Description	INVESTIGATION REPORT FORMS	
1.	Executive summary.		☑
2.	NAPL information.		☑
3.	Site stratigraphy and hydrogeology.		☑
4.	Analytical data summary for surficial soil (0-1 ft bgs).		☐
5.	Analytical data summary for subsurface soil (1 ft bgs to water table).		☑
6.	Analytical data summary for groundwater.		☑
7.	Conclusions and recommendations.		☑
8.	References and protocols.		☑

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All maps submitted to NMED must include a bar scale, legend, north arrow, location of all known soil borings and monitoring wells, and date of map, where appropriate.

☐ *Check the box against the item, if the item is included.*

Map No.	Description	MAPS

Maps 1-6 are part of 14 Day Report. Update and resubmit as appropriate.

Note: Maps may be combined ,as pappropriate.

1.	Topographic map.	☑
2.	Site map with UST system location(s), including tank ID number(s).	☑
3.	Site map with utility locations.	☑
4.	Land use map (radius of 1,000 feet).	☑
5.	Receptor survey map: with detailed land use in the vicinity of the site (at least 1,000 feet in the downgradient direction and one property deep on all other sides including across the street).	☑
6.	Area map with water use well locations: within one mile radius of the site (the wells on the map must be labeled). Maps must also indicate the location of surface water drains including but not limited to streams, lakes, and well head protection areas, within a 500 foot radius of the site.	☑
7.	NAPL thickness contour map.	☑
8.	Area geologic map.	☑
9.	Groundwater gradient map: contoured map with the predominant flow direction from the most recent gauging event (add additional maps if the flow direction fluctuates).	☑
10.	Soil and groundwater concentration contour maps showing boring and well locations and concentrations in each: for benzene, MTBE, total BTEX, and Total PAHs from the most recent sampling event.	☑

ADDITIONAL MAPS:

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☐ *Check the box against the item, if the item is included.*

Attachment No. Description **ATTACHMENTS**

Attachments 1 and 2 are part of 14 Day Report. Update and resubmit as appropriate.

1.	Most recent UST system test results.	☐
2.	Vapor screening results for utilities.	☐
3.	Estimation of NAPL present: Estimated thickness vs measured thickness of NAPL. Include calculation brief for estimated thickness.	☐
4.	Monitoring well construction digram.	☑
5.	Representative soil boring logs: cross-section(s) showing the stratigraphy of the site and the extent of contamination.	☑
6.	Historical groundwater monitoring data for all the monitoring wells. Include any data collected from temporary wells or borings.	☐
7.	Contaminant concentration and depth to groundwater vs. time graphs for wells with four or more sampling events.	☐

ADDITIONAL ATTACHMENTS:

	Laboratory analytical report(s) not previously submitted to the department.

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 1
SITE ID: 4657	**FACILITY ID: 28779**	
SUBMITTAL DATE: 12-Mar-13	**PREPARED BY: Mark R. Hillier - Terracon Consultants,**	

EXECUTIVE SUMMARY

Facility name:	*Fairview Station*
Facility address:	*1626 N. Riverside Drive*
	Espanola, Rio Arriba County, New Mexico
Status of UST system facility:	☐ Active ☑ Inactive
Ground surface condition:	*Partially paved*
Estimated volume and type of product(s) released:	*Unknown volume of unleaded gasoline*
Has any vapor impacts been identified?	☑ No ☐ On-site ☐ Off-site
If yes (check all that apply):	☐ Utility corridor ☐ Subsurface structures ☐ Above surface structures
Is soil contaminated?	☐ No ☑ On-site ☐ Off-site
Is there any contaminant-saturated soil?	☐ No ☑ On-site ☐ Off-site
Is groundwater contaminated?	☐ No ☑ On-site ☐ Off-site
Has the source of release been identified?	☑ Yes ☐ No
Has NAPL ever been detected?	☑ Yes ☐ No
Was NAPL removed?	☑ Yes ☐ No *Approx. 12 Gallons*
Was NAPL detected in the most recent sampling event?	☑ Yes ☐ No
Has surface water been contaminated by the release?	☐ Yes ☑ No ☐ Unknown ☐ Suspected
Shallowest depth to groundwater (ft bgs.):	*14.15 (static elevation corrected for PSH)*
Average depth to groundwater (ft bgs.):	*14.44 (static elevations corrected for PSH)*
Has a drinking water supply well been contaminated by this release?	☐ Yes ☐ No ☑ Unknown ☐ Suspected
If yes	☐ Drinking ☐ Irrigation ☐ Other

RECOMMENDATIONS

- ☐ Collect additional soil data
- ☑ Collect additional groundwater data
- ☑ Continue NAPL removal
- ☐ Perform interim remedial action
- ☐ GW monitoing
- ☐ Perform a tier 1 evaluation

ADDITIONAL NOTES

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 2

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultant

NAPL INFORMATION

Has NAPL been found at the site?	☑ Yes ☐ No
(Note if No, proceed to the next report form)	
Date NAPL first reported at the site (if known):	***31-Jan-13***
Type(s) of NAPL released:	***Gasoline***
Estimated quantity of NAPL present (attach calculation brief):	***Unknown***
List the monitoring wells currently containing NAPL:	***MW-1, MW-2 and MW-3***
Has NAPL removal been initiated?	☑ Yes ☐ No
If Yes, specify method of removal (bailer, pump, etc.)?	***Bailer***
If No, cite reason:	
Frequency of removal (weekly, monthly, etc.):	***Conducted at time of well installation and sampling only***
Total number of recovery events to date:	***2***
Total amount of water recovered:	***Approximately 10 gallons removed with PSH***
Water disposal method:	***Staged on-site***
Total amount of NAPL recovered:	***Approximately 12 gallons***
NAPL disposal method:	***Staged on-site in DOT approved 55-gallon drum***
Date of latest NAPL report submittal:	***no previous reports submitted***

ADDITIONAL NOTES

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 3

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultan

SITE STRATIGRAPHY AND HYDROGEOLOGY

STRATIGRAPHY OF THE SITE

Depth [feet]	Unified soil classification	Type of soil
0-5	*SW*	*Sand, well-graded, brown, moist*
5-19	*CL*	*Clay, silty, brown moist*
19-28	*SW*	*Sand, well-graded, brown, wet*

Predominant soil type: *Interbedded clay, sand and silt*

Depth [feet]	Type of bedrock & geological formation (discuss rock properties and features)
	Bedrock was not encountered above the terminus of the on-site soil borings at 28 ft. bgs

HYDROGEOLOGY OF THE SATURATED ZONE

Type of contaminated aquifer(s)? ☑ Confined ☐ Unconfined ☐ Perched

Underlying predominant aquifer name:	*Tesuque Formation*
TDS of contaminated aquifer(s) [mg/L]	*Unknown*
Describe groundwater level fluctuations:	*Unknown based on one sampling event*
Average depth to static water level:	*14.44 ft. bgs based on PSH corrections*
Average static water elevation relative to MSL [ft]	*5608.47*
Flow direction:	*West-northwest*
Hydraulic gradient (i) [ft/ft]:	*0.004*
Hydraulic conductivity (K) [cm/day]:	*Unknown*

Hydraulic conductivity test method:

☐ Grain size/Sieve analysis ☐ Slug test ☐ Pumping test; Duration (hrs):

☐ Other (*specify and attach literature as appropriate*)

Darcy velocity (K x i) [cm/year]:

Annual precipitation (average for last 10 years) [cm/year]: *9.88 per Western Regional Climate Center, 2013*

UNSATURATED ZONE CHARACTERISTICS

	Values/range			Method
Dry bulk density [g/cm^3]		☐ Estimated	☐ Measured	
Estimated porosity (θ) [cm^3/cm^3]:		☐ Estimated	☐ Measured	
Water content in volumetric units [cm^3/cm^3]:		☐ Estimated	☐ Measured	
Fractional organic carbon content [g-C/g-soil]:	*<0.10%*	☐ Estimated	☑ Measured	*Walkley-Black*

ADDITIONAL NOTES

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 4

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR SURFICIAL SOIL (0 -1 FT BGS.) [mg/kg]

MW / SB No.															
Sampling date															
Sample depth (ft)															
ORGANIC CHEMICALS															
Benzene															
Toluene															
Ethylbenzene															
Xylenes (Total)															
Ethylene Dibromide (EDB)															
1,2-Dichloroethane (EDC)															
MTBE															
POLYCYCLIC AROMATIC HYDROCARBONS															
Acenaphthene															
Anthracene															
Benzo(a)anthracene															
Benzo(a)-pyrene															
Benzo(b)-fluoranthene															
Benzo(k)-flouranthene															
Chrysene															
Dibenz(a,h)anthracene															
Fluoranthene															
Fluorene															
Total Naphthalenes															
Phenanthrene															
Pyrene															
INORGANIC CHEMICALS															
Lead															

NOTE:

Provide any laboratory analytical report(s) not previously submitted to NMED.

Non-detects can be expressed as "<(value of detection limit)". All concentrations should be in mg/kg.

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 5

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR SUBSURFACE SOIL (1 FT BGS TO WATER TABLE) [mg/kg]

MW / SB No.	SB-1/MW-1			SB-2/MW-2			SB-3/MW-3			SB-4			SB-5								
Sampling date	1/31/2013			1/31/2013			2/1/2013			2/1/2013			2/1/2013								
Sample depth (ft)	15'			12.5'			17.5'			22.5'			7.5'								
ORGANIC CHEMICALS																					
Benzene	27			6			21			13			<0.05								
Toluene	84			19			48			77			<0.05								
Ethylbenzene	44			12			18			54			<0.05								
Xylenes (Total)	170			51			77			240			<0.1								
Ethylene Dibromide (EDB)	<2.5			2.5			<1.0			<1.0			<0.05								
1,2-Dichloroethane (EDC)	<2.5			<1.0			<1.0			<1.0			<0.05								
MTBE	<2.5			2.5			1.6			2			<0.05								
POLYCYCLIC AROMATIC HYDROCARBONS																					
Acenaphthene																					
Anthracene																					
Benzo(a)anthracene																					
Benzo(a)-pyrene																					
Benzo(b)-fluoranthene																					
Benzo(k)-flouranthene																					
Chrysene																					
Dibenz(a,h)anthracene																					
Fluoranthene																					
Fluorene																					
Total Naphthalenes																					
Phenanthrene																					
Pyrene																					
INORGANIC CHEMICALS																					
Lead																					

NOTE:

Provide any laboratory analytical report(s) not previously submitted to NMED Office. Add additional sheets as needed.

Non-detects can be expressed as "<(value of detection limit)". All concentrations should be in mg/kg.

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 6

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*									
Screen interval (feet below TOC)		13-28	13-28	13-28									
Water level (feet below TOC)		14.15	14.59	14.58									
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013									
Number of times sampled		1	0 (PSH)	0 (PSH)									
Benzene	No. of detects	1											
WQCC STD. = 10 µg/L	Range (low - high)	16,000											
	Maximum (µg/l)	16,000											
	Mean (µg/l)	16,000											
	Recent trend	N/A											
Toluene	No. of detects	1											
WQCC STD. = 750 µg/L	Range (low - high)	21,000											
	Maximum (µg/l)	21,000											
	Mean (µg/l)	21,000											
	Recent trend	N/A											
Ethylbenzene	No. of detects	1											
WQCC STD. = 750 µg/L	Range (low - high)	3,700											
	Maximum (µg/l)	3,700											
	Mean (µg/l)	3,700											
	Recent trend	N/A											
Xylenes	No. of detects	1											
WQCC STD. = 620 µg/L	Range (low - high)	14,000											
	Maximum (µg/l)	14,000											
	Mean (µg/l)	14,000											
	Recent trend	N/A											

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 6

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*									
Screen interval (feet below TOC)		13-28	13-28	13-28									
Water level (feet below TOC)		14.15	14.59	14.58									
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013									
Number of times sampled		1	0 (PSH)	0 (PSH)									
EDB	No. of detects	0											
WQCC STD. = 0.1 µg/L	Range (low - high)	N/A											
	Maximum (µg/l)	N/A											
	Mean (µg/l)	N/A											
	Recent trend	N/A											
EDC	No. of detects	1											
WQCC STD. = 10 µg/L	Range (low - high)	64											
	Maximum (µg/l)	64											
	Mean (µg/l)	64											
	Recent trend	N/A											
MTBE	No. of detects	1											
WQCC STD. = 100 µg/L	Range (low - high)	3,900											
	Maximum (µg/l)	3,900											
	Mean (µg/l)	3,900											
	Recent trend	N/A											
Acenaphthene*	No. of detects	1											
Risk-based Target = 2,200 µg/L	Range (low - high)	1.4											
	Maximum (µg/l)	1.4											
	Mean (µg/l)	1.4											
	Recent trend	N/A											

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

*** No WQCC Standard available, value shown is estimated (refer Table 4-7 of Guidance Document).**

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 6
SITE ID: 4657		FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13		PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*									
Screen interval (feet below TOC)		13-28	13-28	13-28									
Water level (feet below TOC)		14.15	14.59	14.58									
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013									
Number of times sampled		1	0 (PSH)	0 (PSH)									
Anthracene*	No. of detects	0											
Risk-based Target = 11,000 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Benzo(a)anthracene*	No. of detects	0											
Risk-based Target = 1.2 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Benzo(a)pyrene	No. of detects	0											
WQCC STD. = 0.7 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Benzo(b)-fluoranthene*	No. of detects	0											
Risk-based Target = 1.2 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

*** No WQCC Standard available, value shown is estimated (refer Table 4-7 of Guidance Document).**

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 6

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*									
Screen interval (feet below TOC)		13-28	13-28	13-28									
Water level (feet below TOC)		14.15	14.59	14.58									
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013									
Number of times sampled		1	0 (PSH)	0 (PSH)									
Benzo(k)-fluoranthene*	No. of detects	*0*											
Risk-based Target = 1.2 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Chrysene*	No. of detects	*0*											
Risk-based Target = 117 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Dibenz(a,h)anthracene*	No. of detects	*0*											
Risk-based Target = 0.12 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
Fluoranthene*	No. of detects	*0*											
Risk-based Target = 1,460 µg/L	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

*** No WQCC Standard available, value shown is estimated (refer Table 4-7 of Guidance Document).**

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 6

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*										
Screen interval (feet below TOC)		13-28	13-28	13-28										
Water level (feet below TOC)		14.15	14.59	14.58										
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013										
Number of times sampled		1	0 (PSH)	0 (PSH)										
Fluorene*	No. of detects	*1*												
Risk-based Target = 1,460 µg/L	Range (low - high)	*1.4*												
	Maximum (µg/l)	*1.4*												
	Mean (µg/l)	*1.4*												
	Recent trend	*N/A*												
Total Naphthalenes	No. of detects	*1*												
WQCC STD. = 30 µg/L	Range (low - high)	*630*												
	Maximum (µg/l)	*630*												
	Mean (µg/l)	*630*												
	Recent trend	*N/A*												
Phenanthrene*	No. of detects	*1*												
Risk-based Target = 1,100 µg/L	Range (low - high)	*1.3*												
	Maximum (µg/l)	*1.3*												
	Mean (µg/l)	*1.3*												
	Recent trend	*N/A*												
Pyrene*	No. of detects	*0*												
Risk-based Target = 1,100 µg/L	Range (low - high)													
	Maximum (µg/l)													
	Mean (µg/l)													
	Recent trend													

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

*** No WQCC Standard available, value shown is estimated (refer Table 4-7 of Guidance Document).**

NEW MEXICO RBDM **INVESTIGATION REPORT** **FORM NO. 6**

SITE ID: 4657 **FACILITY ID: 28779**

SUBMITTAL DATE: 12-Mar-13 **PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.**

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring well number		*MW-1*	*MW-2*	*MW-3*									
Screen interval (feet below TOC)		13-28	13-28	13-28									
Water level (feet below TOC)		14.15	14.59	14.58									
Installation date (month/year)		Feb. 2013	Feb. 2013	Feb. 2013									
Number of times sampled		1	0 (PSH)	0 (PSH)									
Lead WQCC STD. = 50 µg/L	No. of detects	*1*											
	Range (low - high)	*3.5*											
	Maximum (µg/l)	*3.5*											
	Mean (µg/l)	*3.5*											
	Recent trend	*N/A*											
	No. of detects												
	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
	No. of detects												
	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												
	No. of detects												
	Range (low - high)												
	Maximum (µg/l)												
	Mean (µg/l)												
	Recent trend												

NOTE: Provide any laboratory report(s) not previously submitted to NMED Office. Add additional sheets as needed.

For "Range", use all available data.

For "Maximum" and "Mean", use the recent two (2) years' data.

For "Recent Trend", use the recent 2 years' data or the recent 8 measurements, as appropriate.

*** No WQCC Standard available, value shown is estimated (refer Table 4-7 of Guidance Document).**

NEW MEXICO RBDM	INVESTIGATION REPORT	[redacted]

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

ADDITIONAL NOTES	

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 7

SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

CONCLUSIONS AND RECOMMENDATIONS

1.	*Has NAPL been removed?*
	Yes. On February 1, 2013, approximately 4.5 gallons of PSH was removed from monitoring well MW-2 and approximately 0.5 gallon of PSH was removed from monitoring well MW-3. On February 4, 2013, approximately five gallons of PSH was removed from monitoring well MW-2 and approximately two gallons of PSH was removed from monitoring well MW-3. The PSH was placed in a 55-gallon drum, which was labeled and staged on site.
2.	*Has the site (soil and aquifer) been adequately investigated and characterized?*
	No. The horizontal and vertical extent of soil and groundwater impact have not been fully delineated.
3.	*Has the source soil(s) been delineated spatially and vertically, on-site and off-site? Are the available soil data collected within the last 5 years?*
	No
4.	*Has groundwater plume been delineated in all directions?*
	No
5.	*Have all relevant COCs (based on the product released) been analyzed for in soil and groundwater?*
	Yes
6.	*Have the recommended laboratory methods been used and required QA/QC met?*
	Yes

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 7
SITE ID: 4657	FACILITY ID: 28779	
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.	

CONCLUSIONS AND RECOMMENDATIONS

7.	*Is the plume stable or shrinking, based on the concentration trend plots?*
	Unknown based on one sampling event
8.	*Are the groundwater contaminant concentrations in all monitoring wells below the applicable standards for the 8 consecutive quarters (4 consecutive quarters for wells with clear decreasing concentration trends)?*
	No
9.	*Is a waiver petition required for alternative groundwater protection standards? If the answer to Question No.8 is yes, no waiver petition is required and groundwater protection pathway need not be included in any risk-based evaluation of the site.*
	Yes
10.	*Other relevant information*
11.	*Is a tier 1 risk-based evaluation of the site necessary?*
	yes, subsequent to remediation
12.	*Is groundwater monitoring recommended?*
	yes, subsequent to remediation

NEW MEXICO RBDM	INVESTIGATION REPORT	FORM NO. 8

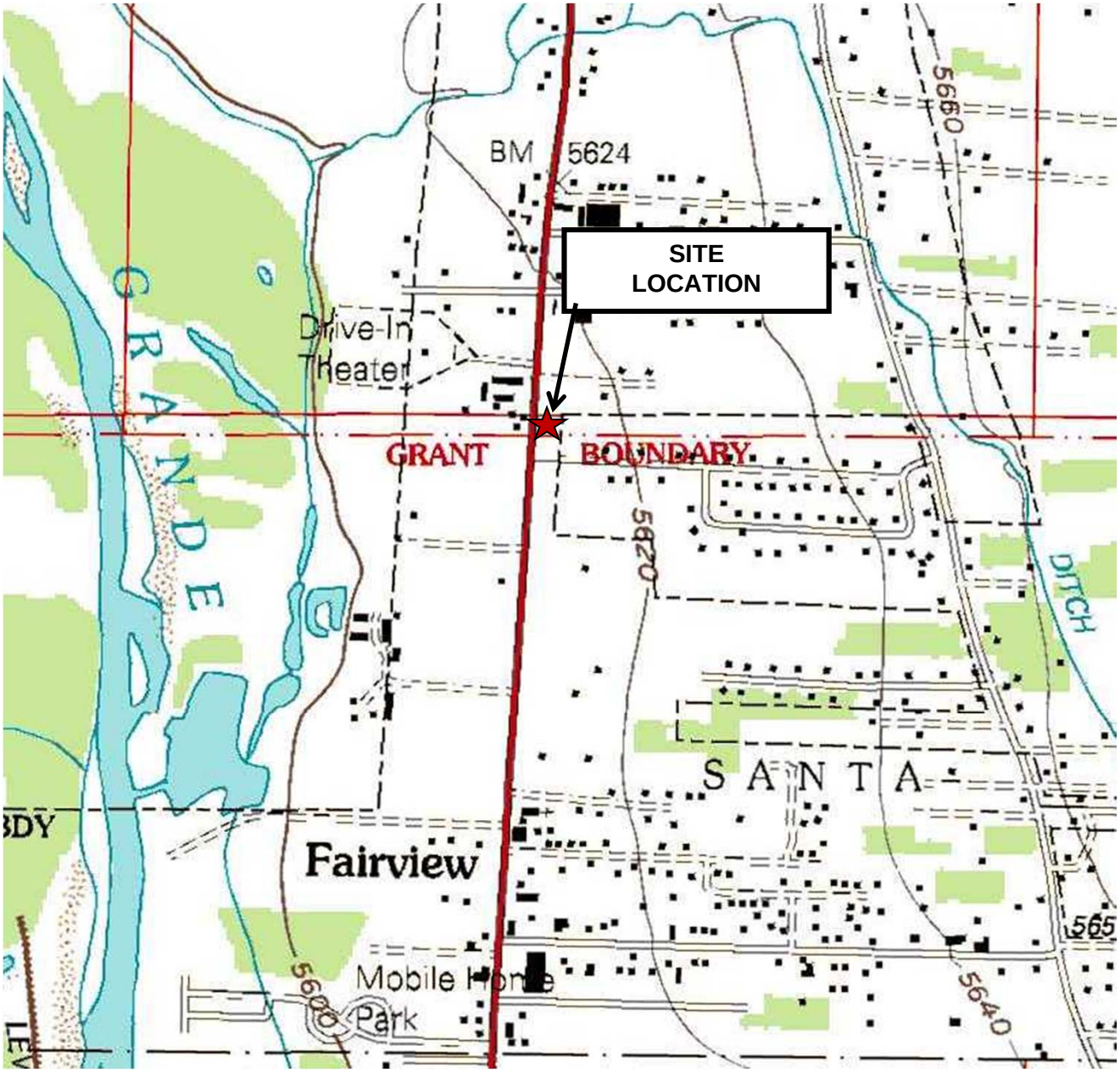
SITE ID: 4657	FACILITY ID: 28779
SUBMITTAL DATE: 12-Mar-13	PREPARED BY: Mark R. Hillier - Terracon Consultants, Inc.

REFERENCES AND PROTOCOLS

	NMED PSTB Regulations, 20.5 NMAC, 2013
	Guidelines for Corrective Action, NMED PSTB, March 13, 2000
	Preliminary Geologic Map of the San Juan Pueblo Quadrangle, Daniel J. Koning and Kim Manley, August 2003
	General Geology and Ground Water Conditions in the Truchas-Espanola-Velarde Area of Rio Arriba County, New Mexico, 1974
	Unified Soil Classification System

APPENDIX B

Figures

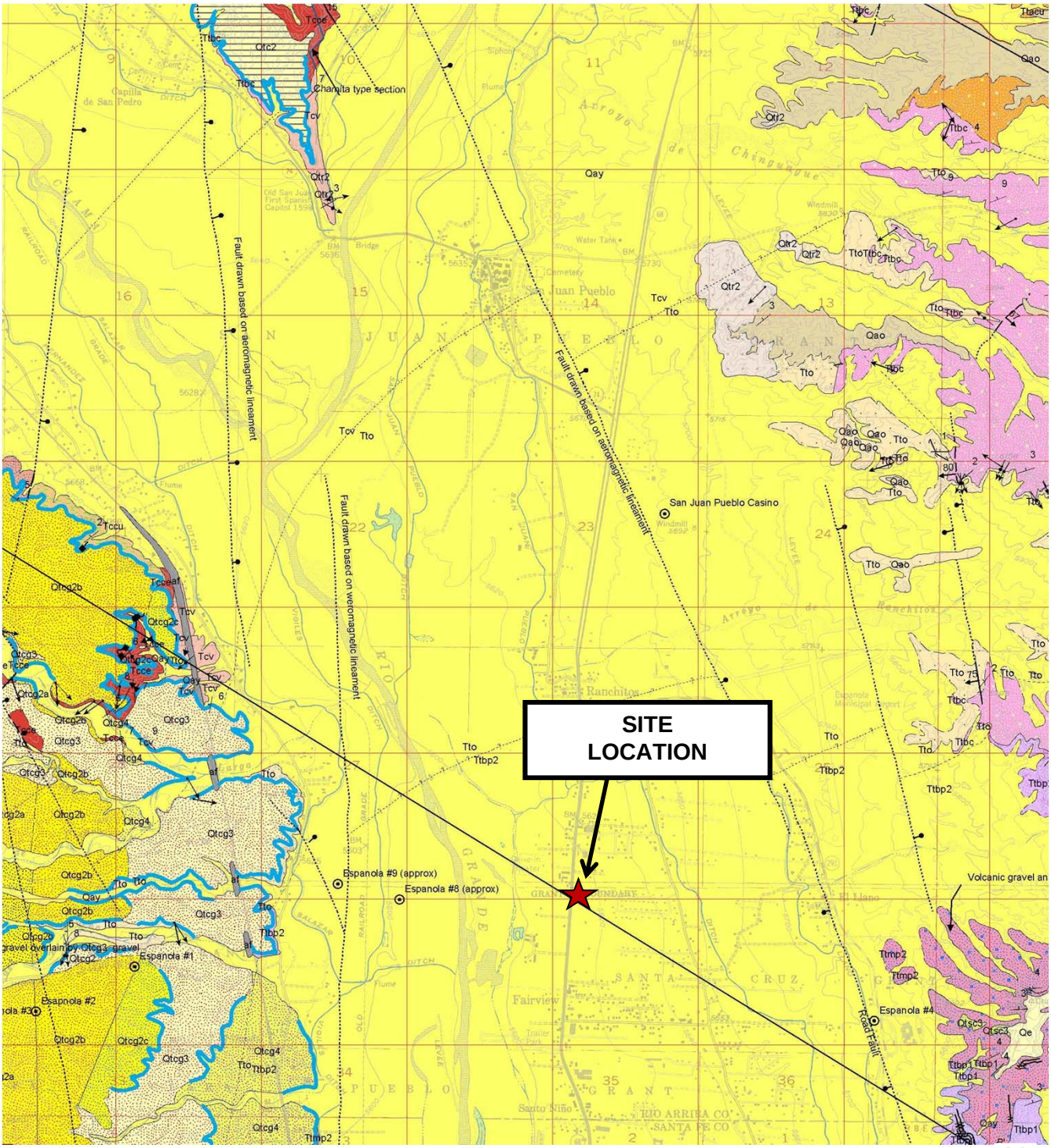


N

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

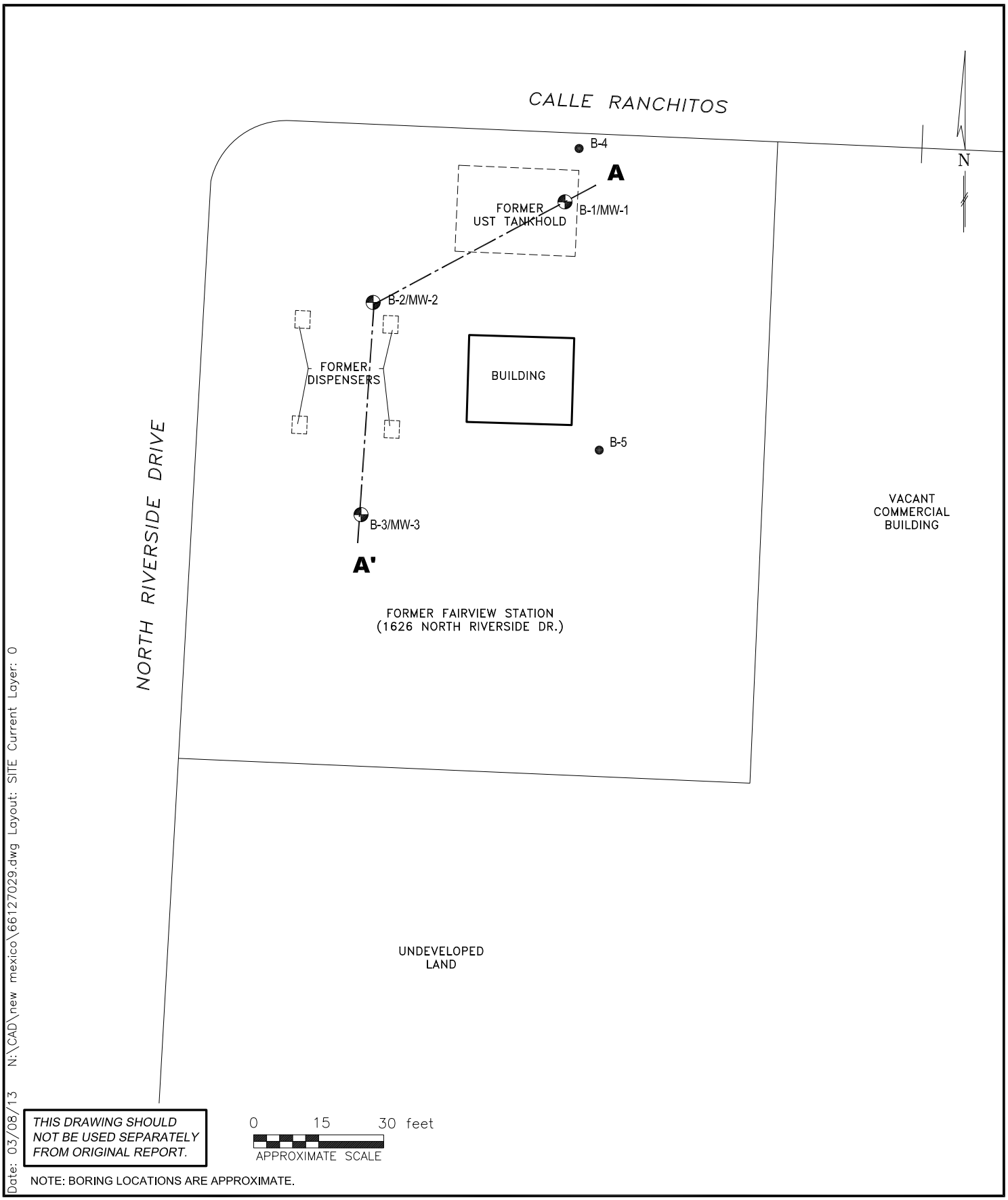
DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: MRH	Project No. 66127029	Terracon Consulting Engineers & Scientists 4905 Hawkins, NE Albuquerque, New Mexico 87109 PH. (505) 797-4287 FAX. (505) 797-4288	SITE TOPOGRAPHIC MAP	EXHIBIT
Drawn by: JAS	Scale: 1 ≅ 1,000'		FAIRVIEW STATION 1626 NORTH RIVERSIDE DRIVE ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO	1
Checked by: MRH	File Name:			
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	Terracon Consulting Engineers & Scientists 4905 Hawkins, NE Albuquerque, New Mexico 87109 PH. (505) 797-4287 FAX. (505) 797-4288	SITE GEOLOGIC MAP	EXHIBIT
Drawn by: JAS	Scale: 1 ≅ 3,400'		FAIRVIEW STATION 1626 NORTH RIVERSIDE DRIVE ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO	2
Checked by: MRH	File Name:			
Approved by: MRH	Date: 3/6/13			



Date: 03/08/13 N:\CAD\new mexico\66127029.dwg Layout: SITE Current Layer: 0

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

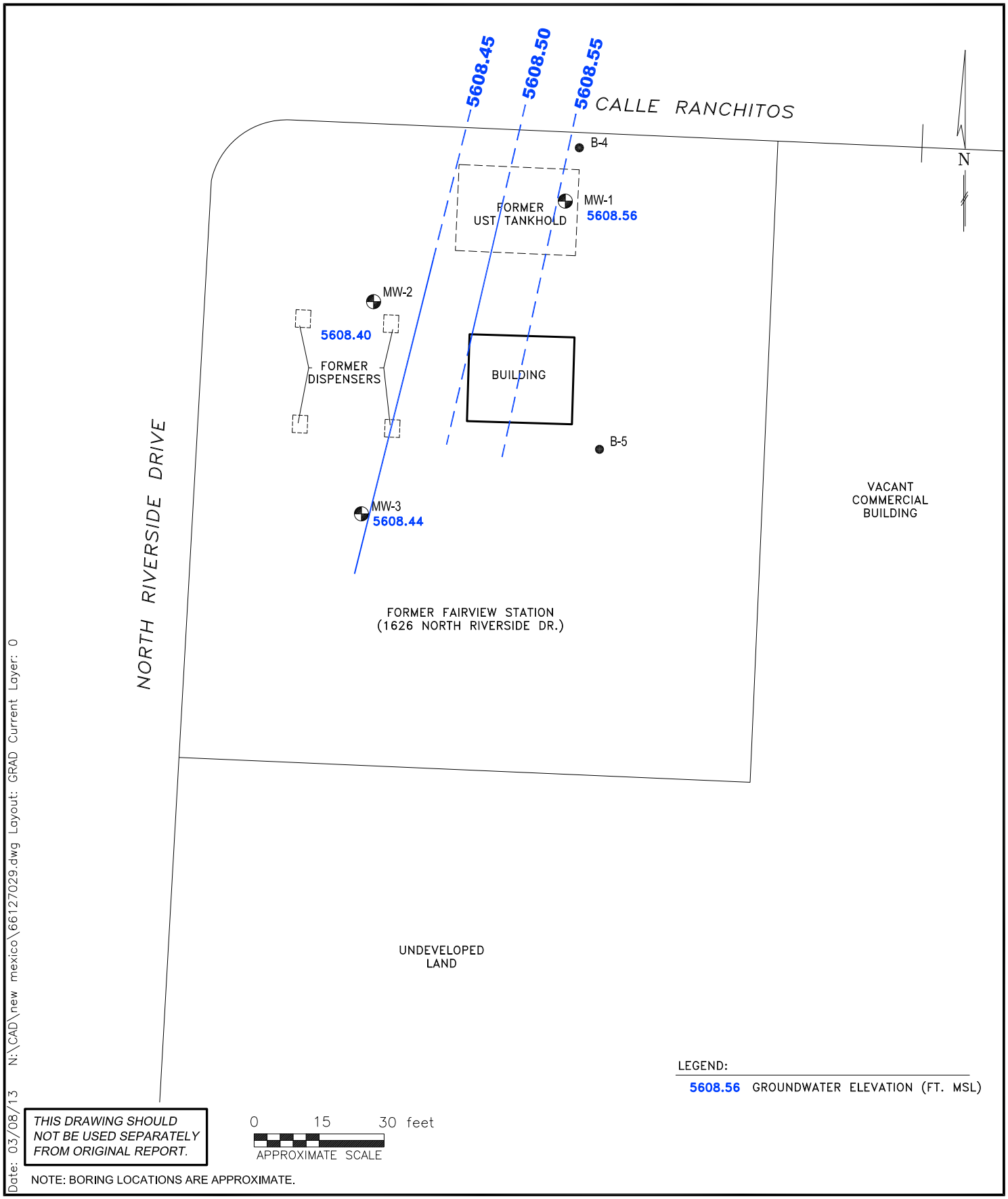
Project No.	66127029
Scale:	AS SHOWN
Date:	03/08/13

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



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: BORING LOCATIONS ARE APPROXIMATE.

Date: 03/08/13 N:\CAD\new mexico\66127029.dwg Layout: GRAD Current Layer: 0

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

Project No.	66127029
Scale:	AS SHOWN
Date:	03/08/13

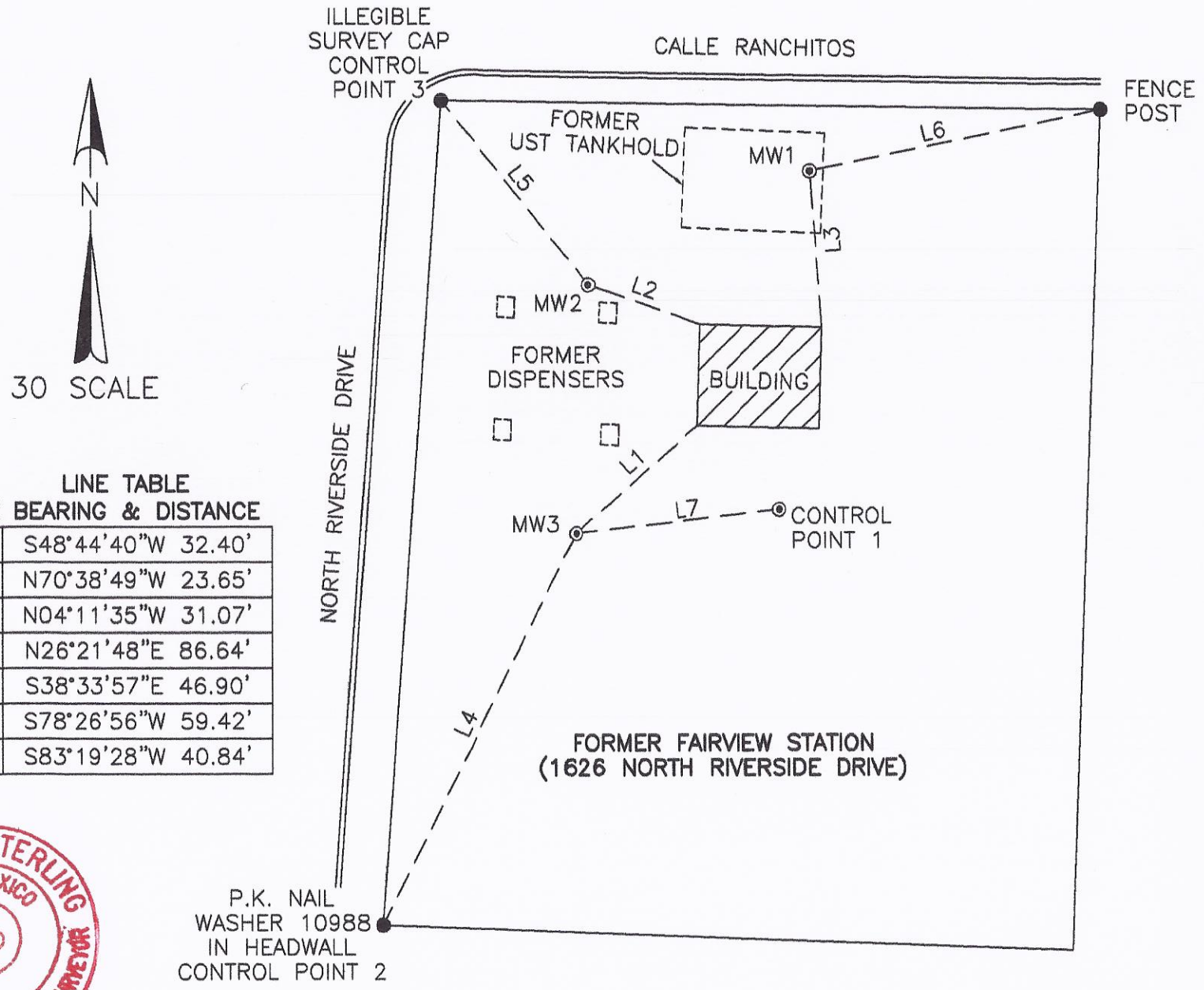
Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

GROUNDWATER GRADIENT MAP

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

EXHIBIT 4

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	S38°33'57"E 46.90'
L6	S78°26'56"W 59.42'
L7	S83°19'28"W 40.84'

LARRY L. STERLING
NEW MEXICO
11010
REGISTERED PROFESSIONAL SURVEYOR

SKETCH NO. 13012

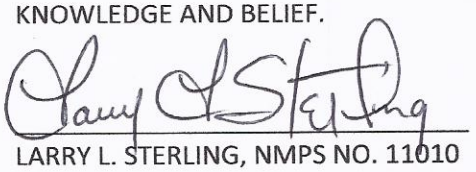
SURVEY NO. 13012

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.

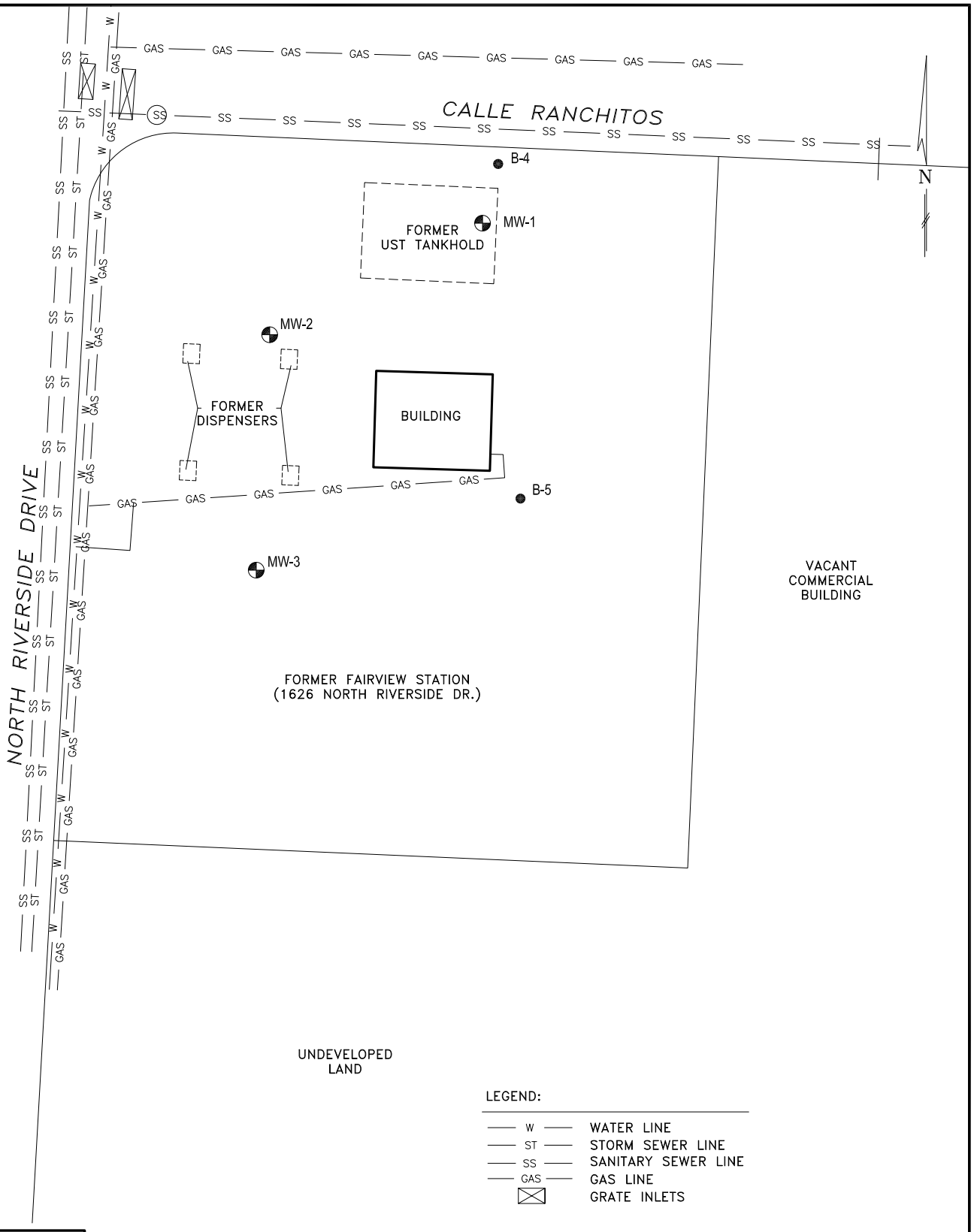
POINT DESIGNATION	NORTHING	EASTING	ELEVATION
CONTROL POINT 1	1825340.421	1695422.675	5623.39
MONITOR WELL 1	1825409.173	1695426.257	5622.71
MONITOR WELL 2	1825386.590	1695381.991	5622.99
MONITOR WELL 3	1825337.298	1695379.440	5623.02

ELEVATIONS WERE TAKEN AT THE TOP OF A 2 INCH PVC PIPE 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 THAT THE DATA AND SKETCH PROVIDED HEREON ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



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



Date: 03/08/13 N:\CAD\new mexico\66127029.dwg Layout: UTIL Current Layer: 0

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

0 15 30 feet
APPROXIMATE SCALE

NOTE: BORING LOCATIONS ARE APPROXIMATE.

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

Project No.	66127029
Scale:	AS SHOWN
Date:	03/08/13

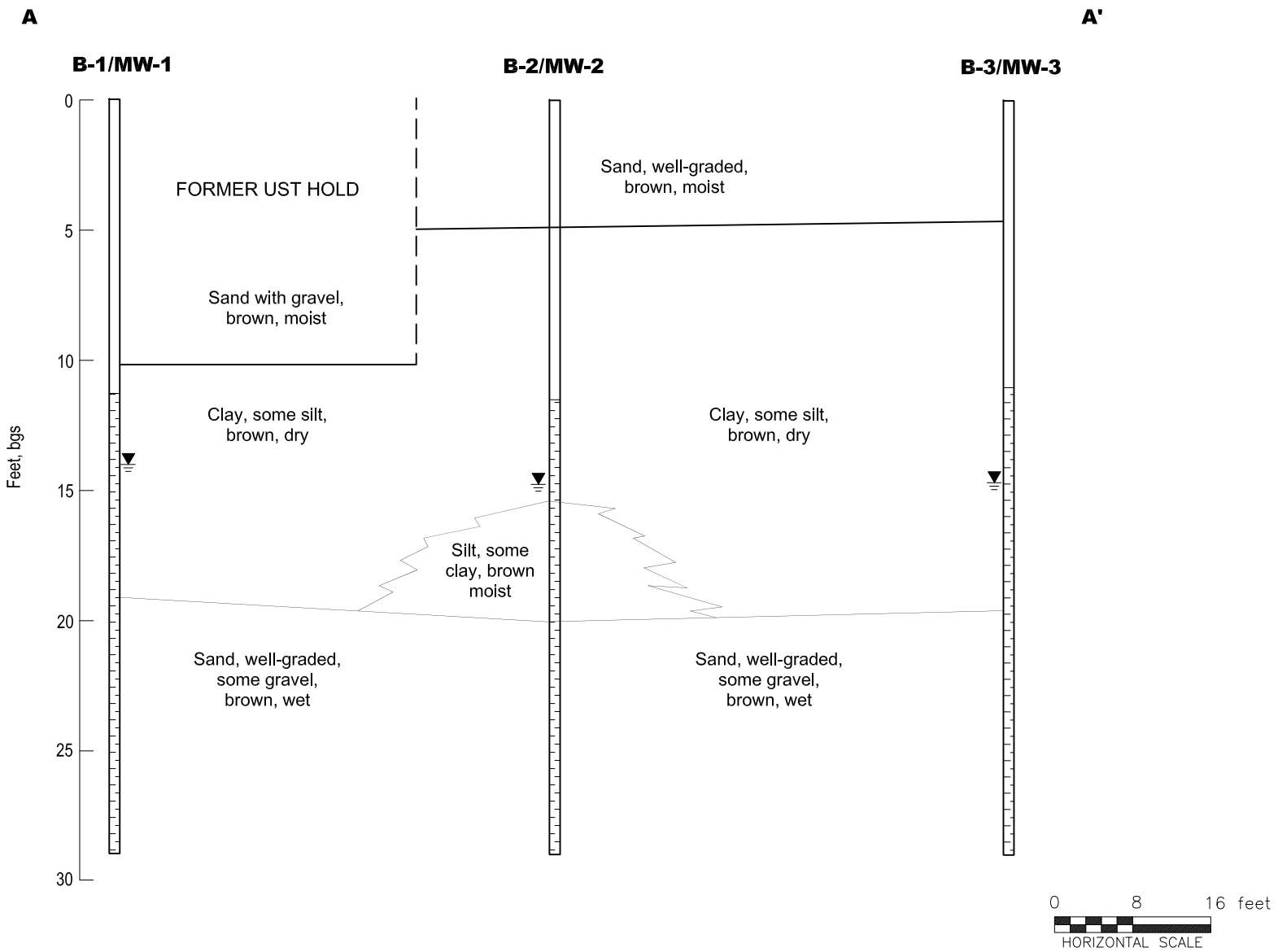
Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
PH. (505) 797-4287 FAX. (505) 797-4288

BURIED UTILITIES

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

EXHIBIT
5

Date: 03/08/13 N:\CAD\new mexico\66127029.dwg Layout: landscape Current Layer: 0



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: ALL BORING LOCATIONS ARE APPROXIMATE.

Project Mngr:	MRH
Drawn By:	CDD
Checked By:	MRH
Approved By:	MRH

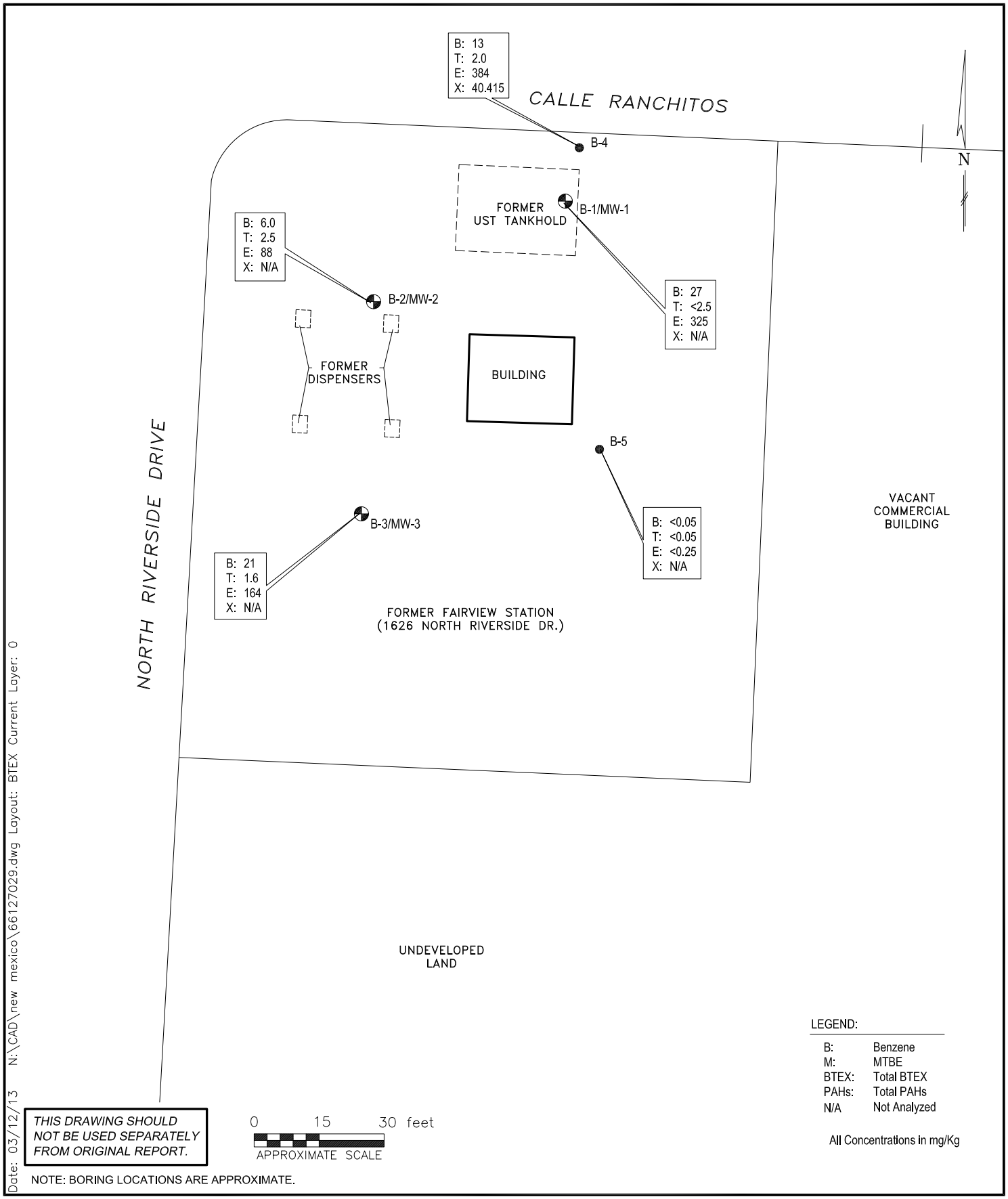
Project No.	66127029
Scale:	AS SHOWN
Date:	03/08/13

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

SITE SOIL CROSS SECTION

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

EXHIBIT 6



Date: 03/12/13 N:\CAD\new mexico\66127029.dwg Layout: BTEX Current Layer: 0

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

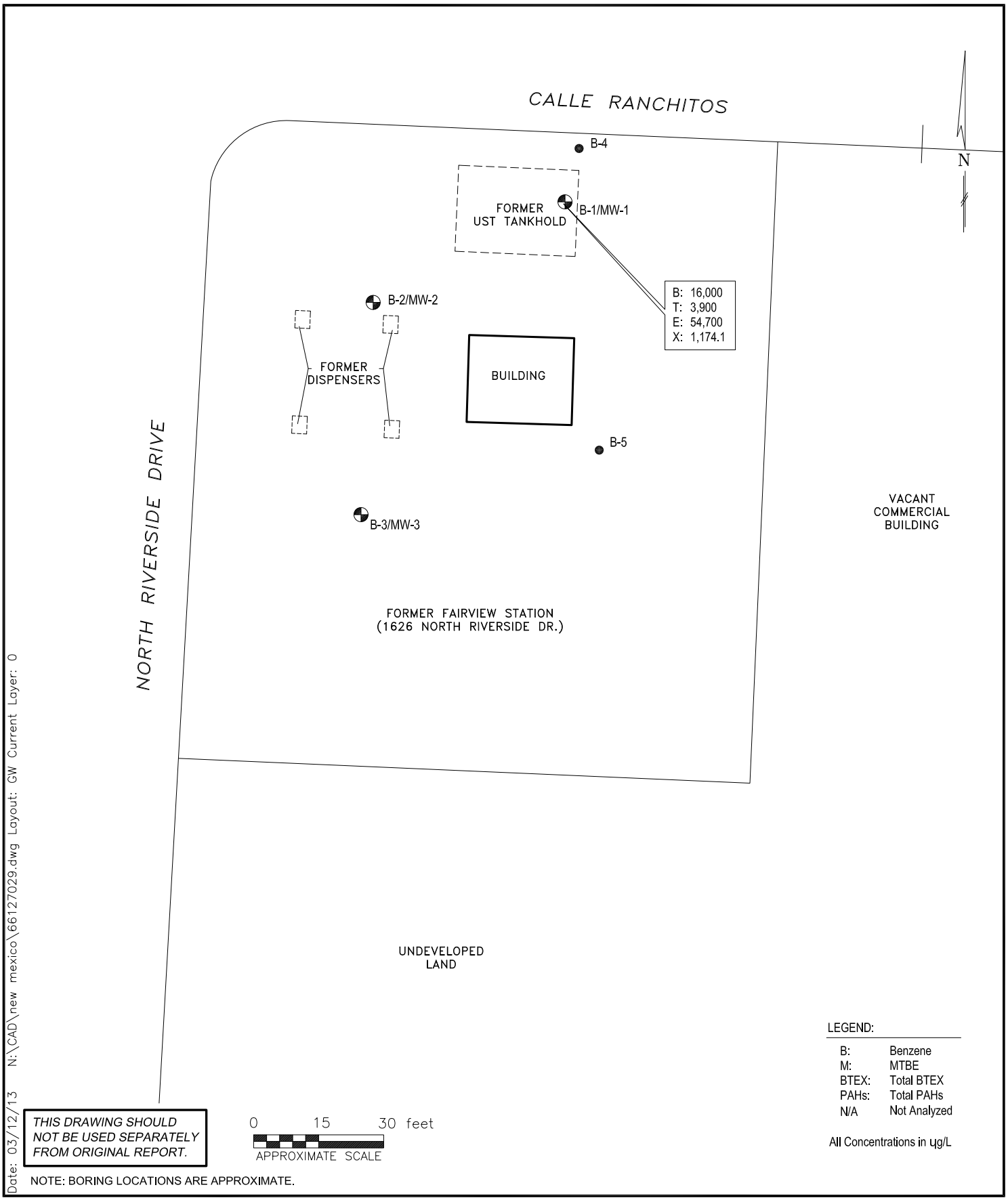
Project No.	66127029
Scale:	AS SHOWN
Date:	03/12/13

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 7



LEGEND:

B:	Benzene
M:	MTBE
BTEX:	Total BTEX
PAHs:	Total PAHs
N/A	Not Analyzed

All Concentrations in µg/L

0 15 30 feet
APPROXIMATE SCALE

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: BORING LOCATIONS ARE APPROXIMATE.

Date: 03/12/13 N:\CAD\new mexico\66127029.dwg Layout: GW Current Layer: 0

Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH
Project No.	66127029
Scale:	AS SHOWN
Date:	03/12/13

Terracon
Consulting Engineers and Scientists
4905 Hawkins NE Albuquerque, New Mexico 87109
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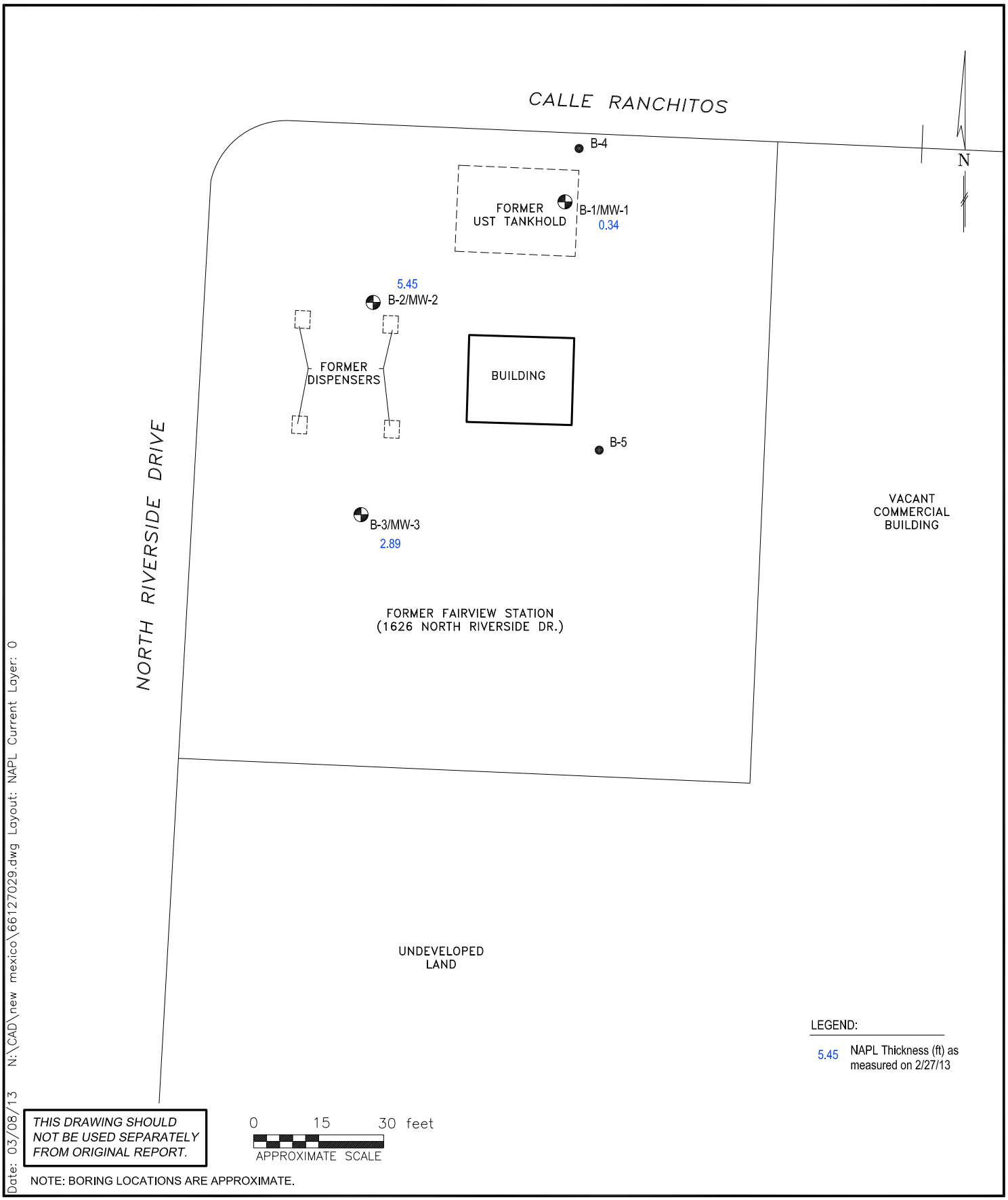
GROUNDWATER CONCENTRATION MAP

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

EXHIBIT
8



Date: 03/08/13 N:\CAD\new mexico\66127029.dwg Layout: NAPL Current Layer: 0

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

NOTE: BORING LOCATIONS ARE APPROXIMATE.

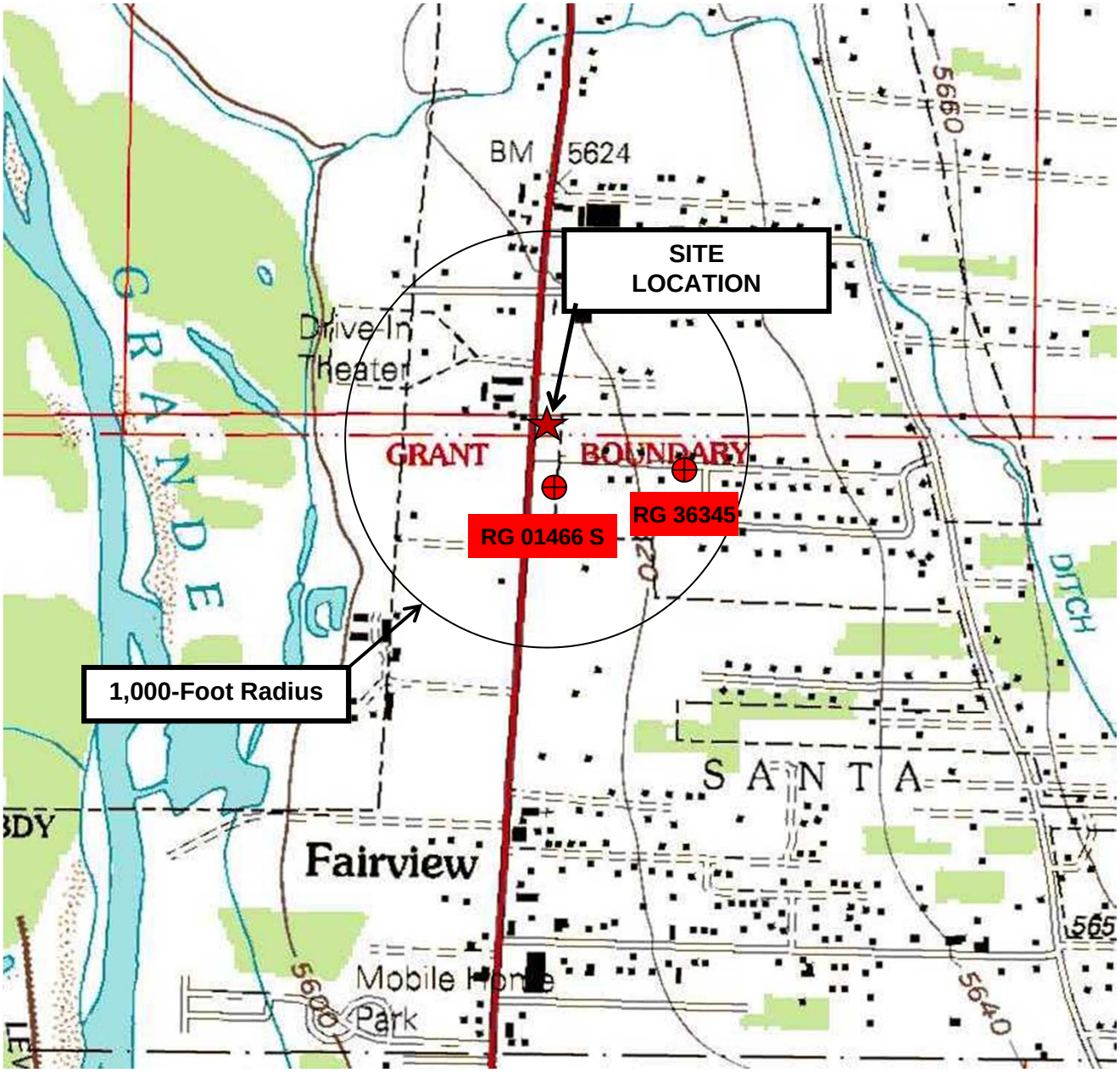
Project Mngr:	MH
Drawn By:	JJD
Checked By:	MH
Approved By:	MH
Project No.	66127029
Scale:	AS SHOWN
Date:	03/08/13

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

NAPL THICKNESS MAP

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

EXHIBIT 9

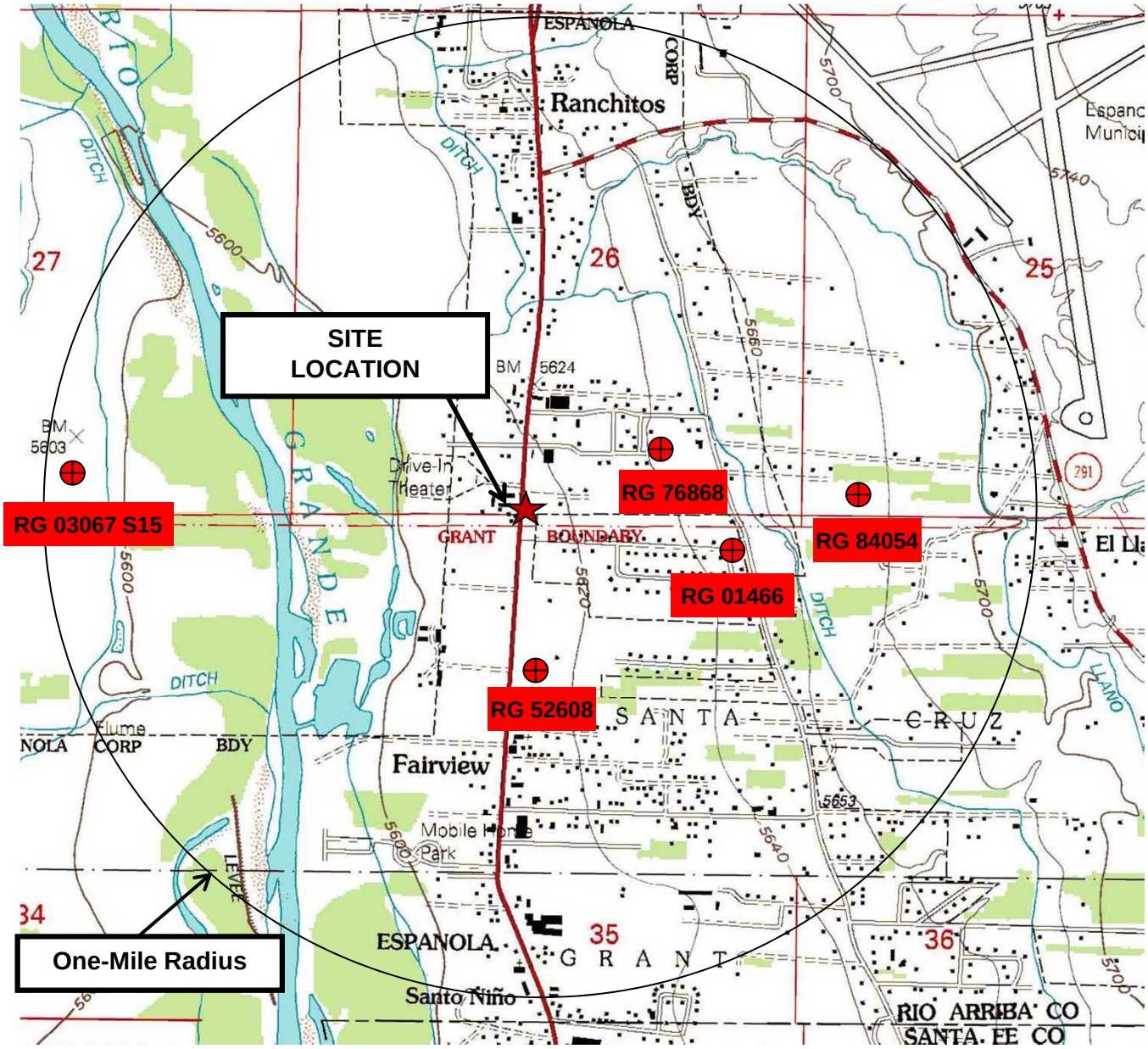


USGS San Juan Pueblo, NM published 1977 (1:24,000)

N

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

Project Manager: MRH	Project No. 661270293	Terracon Consulting Engineers & Scientists	1,000-FOOT RADIUS WATER WELL 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 10
Approved by: MRH	Date: 3/6/13		



Map Source: 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. 661270293	Terracon Consulting Engineers & Scientists	ONE-MILE RADIUS PUBLIC WELL MAP
Drawn by: JAS	Scale: 1 ≅ 1,670'	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 11
Approved by: MRH	Date: 3/6/13		

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Subbasin	County	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RG 36345			RA	Shallow	2	35	21N	08E	404372	3986219	250	07/10/1981	07/13/1981	06/01/1981	103	24	G.R. STEVENS	514

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 404132 **Northing (Y):** 3986289 **Radius:** 305

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
RG 36345			2	35	21N	08E	404372	3986219

Driller License:	STEVENS WELL DRILLING				
Driller Name:	G.R. STEVENS				
Drill Start Date:	07/10/1981	**Drill Finish Date:**	07/13/1981	**Plug Date:**	
Log File Date:	06/01/1981	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.63	**Depth Well:**	103 feet	**Depth Water:**	24 feet

New Mexico Office of the State Engineer
Wells Without Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number	POD Code	Subbasin	County	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y	Distance
RG 93769 POD3		RGSC									404129	3986309	20
SD 09189 POD3	O										404129	3986309	20
RG 93769 POD2		RGSC									404128	3986320	31
SD 09189 POD2	O	RGSC									404128	3986320	31
RG 93769 POD1		RGSC									404126	3986327	38
RG 01466 S				Shallow							404159	3986191	100

Record Count: 6

UTMNAD83 Radius Search (in meters):

Easting (X): 404132 **Northing (Y):** 3986289 **Radius:** 305

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	Code	POD Subbasin	County	Source	q q q 6416 4	Sec	Twn	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RG 36345			RA	Shallow	2	35	21N	08E	404372	3986219	250	07/10/1981	07/13/1981	06/01/1981	103	24	G.R. STEVENS	514
RG 76868 POD1		RGSC	RA	Shallow					404529	3986522	460	11/04/2002	11/05/2002	04/23/2004	200	35	NOT CONTRACTED	1195
RG 52608			SF	Shallow					404184	3985825	466	07/01/1991	07/01/1991	09/05/1991	86	30		935
RG 66129			RA	Shallow					404568	3986049	497	03/27/1997	03/28/1997	02/18/1998	80	30		227
RG 77591		RGSC	RA	Shallow					404675	3986063	588	09/03/2003	09/08/2003	09/24/2003	65	40	LUHMAN, PAUL W.	1315
RG 77591 CLW283261	O		RA	Shallow					404675	3986063	588	10/01/2002	01/11/2003	02/11/2003	40	12	NOT REQUIRED	
RG 01466				Shallow					404760	3986248	629	01/06/2004	01/01/1951	02/01/2005	300	44		1472
RG 76869		RGSC	RA	Shallow		35	21N	08E	404488	3985730	662	11/01/2002	11/02/2002	04/23/2004	200	35		1195
RG 24956		RGSC	RA	Shallow					403786	3985678	701	05/22/1974	05/23/1974	06/05/1974	84	7	COOK, ROBERT R.	579
RG 80402		RGSC	RA	Shallow		26	21N	08E	404878	3986185	753	07/30/2003	07/31/2003	09/19/2003	125	74	GARY PETERS	790
RG 83067 POD2				Shallow					404675	3985762	756	06/01/2006	06/19/2006	07/03/2006	485	35	WILLIAMS, GEORGE	1195
RG 84619			RA	Shallow					403947	3987024	758	02/18/2006	02/22/2006	03/04/2006	142	14	PETERS, GARY E.	790
RG 27387			XX	Shallow					403967	3985523	782	04/15/1977	04/19/1977	04/29/1977	52	16	SHAMROCK DRILLING CO.	297
RG 22107		RGSC	RA	Shallow					404920	3986151	800	10/01/1972	10/01/1972	10/30/1972	56	30		226
RG 44652			XX	Shallow					404241	3985489	806	01/25/1986	01/27/1986	12/22/1986	101	57		
RG 37725			RA	Shallow					404949	3986059	848	04/02/1982	04/06/1982	04/08/1982	85	53	ROYBAL'S WATER WELL	227
RG 26470			RA	Shallow					403845	3985464	873	12/01/1978	12/28/1978	12/28/1978	115	30		606

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Subbasin	County	Source	q 6416	q 4	Sec	Twp	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RG 93434 POD1				Shallow						404055	3985409	882	06/05/2012	06/05/2012	06/08/2012	14	7	HELTON, ROB	1644
RG 89602 POD1		NRG	RA	Shallow						404891	3986753	889	08/28/2007	08/30/2007	07/24/2008	140	68	PETERS, GARY E.	790
RG 33637		RGSC	RA	Shallow			09	20N	09E	404027	3985401	894	01/02/1980	01/03/1980	01/11/1980	65	11	ROBERT SALINE	599
RG 72675		RGSC	RA	Shallow			36	21N	08E	405043	3986210	914	11/09/1999	11/09/1999	12/15/1999	160	8	GARY PETERS	790
RG 84475			RA	Shallow						405043	3986210	914	12/30/2005	12/30/2005	01/13/2006	150	60		790
RG 29648			RA	Shallow						405103	3986149	980	09/04/1978	09/05/1978	09/13/1978	94	72	OASIS DRILLING	790
RG 59284			RA	Shallow						404667	3985453	992	04/13/1994	04/15/1994	11/17/1994	50	6		227
RG 91232 POD1			RA	Shallow						405143	3986478	1028	02/26/2009	02/27/2009	03/13/2009	180	64		547
RG 84054			RA	Shallow			36	21N	08E	405163	3986364	1033	11/23/2005	11/28/2005	12/08/2005	86	65		227
RG 72893		RGSC	RA	Shallow						403933	3985249	1057	09/30/1999	10/08/1999	12/17/1999	125	6	LUHMAN, PAUL W. (LD)	1315
RG 07545		RGSC	RA	Shallow						404016	3985227	1068	06/25/1962	07/02/1962	07/06/1962	110	67	AKIN, JAMES W.	220
RG 80748			RA	Shallow			36	21N	08E	405124	3985876	1074	01/19/2004	01/21/2004	01/27/2004	173	65		1277
RG 65546			RA	Shallow						405194	3986087	1080	08/01/1996	08/01/1996	08/23/1996	160	61		622
RG 90533 POD1			RA	Shallow						404702	3985369	1082	08/15/2008	08/16/2008	08/19/2008	158	30		1277
RG 74576		RGSC	RA	Shallow						405066	3985662	1125	09/26/2000	09/26/2000	10/16/2000	120	67	GARY PETERS	790
RG 89090 POD1		RGSC	RA	Shallow						405312	3986161	1186	09/14/2007	09/16/2007	09/24/2007	95	70	COOK, ROBERT R.	579
RG 23007 POD2		NRG	RA	Shallow						405215	3985794	1190	08/30/2011	08/31/2011	12/15/2011	110	71	PETERS, GARY E.	790
RG 81244			RA	Shallow						405223	3986769	1192	11/28/2003	11/28/2003	11/02/2004	130	86	PETERS, GARY E.	790
RG 40094		NRG	RA	Shallow	4	2 1	26	21N	08E	404972	3987156	1207	08/09/1983	08/09/1983	08/12/1983	83	59	PETERS, GARY E.	790
RG 77673		RGSC	RA	Shallow						405376	3986084	1261	08/18/2002	08/22/2002	03/30/2003	110	90	ROYBAL, JAKE E.	227

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	POD Code	Subbasin	County	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
RG 53637			RA	Shallow					405446	3985928	1362	09/10/2007	09/11/2007	09/24/2007	95	71		579
RG 35545		RGSC	RA	Shallow					405123	3985326	1381	01/22/2004	01/24/2004	01/27/2004	180	65	STEVENS, RODNEY	1277
RG 67310			RA						405498	3986022	1391			06/05/1997				
RG 60888			RA	Shallow					402872	3985690	1394	11/14/1994	11/16/1994	12/06/1996	50	3		227
RG 72007			RA	Shallow	2 4 4	35	21N	08E	404799	3985055	1402	06/02/1999	06/03/1999	07/07/1999	100	36	GARY PETERSTED	790
RG 24308		RGSC	RA	Shallow					405527	3985960	1433	12/01/1973	12/01/1973	12/26/1973	107	75	ROMERO, PAT	226
RG 75935		RGSC	RA	Shallow					405432	3985657	1445	08/23/2002	08/24/2002	11/22/2002	180	60	PETERS, GARY E.	790
RG 57222			RA	Shallow					402811	3985660	1462	04/21/1993	04/21/1993	11/12/1993	50	7		790
RG 23157		RGSC	RA	Shallow					405462	3985656	1472	05/01/1973	05/01/1973	05/21/1973	67	30		226
RG 03067 S15		NRG	RA	Shallow	3 3 4	27	21N	08E	402665	3986450	1475	03/06/2002	07/21/2002	09/19/2002	450	13	LEE F. GEBBERT	1311
RG 51260			SF	Shallow					405589	3986051	1476	09/06/1990	09/08/1990	09/19/1990	125	85		986
RG 88976 POD1			RA	Shallow					405545	3986723	1478	04/26/2007	04/27/2007	08/16/2007	140	85	GARY PETERS	790
RG 91036 POD1				Shallow					405407	3987039	1479	12/12/2008	12/13/2008	01/08/2009	140	87		790
RG 65165			RA	Shallow					405183	3985233	1489	03/16/1998	03/17/1998	03/24/1998	212	74		1277
RG 73804		RGSC	RA	Shallow					405682	3986172	1554	06/15/2000	06/17/2000	08/07/2001	156	110	JAKE E. ROYBAL	227
RG 92782 POD1		NRG	RA	Shallow					403773	3987803	1555	06/01/2011	06/04/2011	01/05/2012	52	10	ROYBAL, JAKE E.	227
RG 85624			RA	Shallow					403859	3987873	1607	06/30/2006	06/30/2006	07/07/2006	140	21		790

Record Count: 54

UTMNAD83 Radius Search (in meters):

Easting (X): 404132 **Northing (Y):** 3986289 **Radius:** 1609.3

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
RG 01466	RGSC	SUB	0	VALLEY ESTATES WATER ASSOC		RG 01466		SANTA CRUZ	Shallow					404759	3986248
					RA	RG 01466 -S			Shallow	2 2 1	35	21N	08E		
						RG 01466 S		SANTA CRUZ	Shallow					404158	3986191

Record Count: 3

POD Search:

POD Number: RG 01466

Sorted by: File Number

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE)

(acre ft per annum) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
RG 52608		MUL	3	LINDY AKES	SF	RG 52608		SANTA CRUZ	Shallow					404184	3985825

Record Count: 1

POD Search:

POD Number: RG 52608

Sorted by: File Number

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
RG 76868	RGSC	MUL	3	VERNON D. AKES	RA	RG 76868 POD1		SANTA CRUZ LAND GRANT	Shallow					404528	3986522

Record Count: 1

POD Search:

POD Number: RG 76868 POD1

Sorted by: File Number

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
RG 84054			3	JACK TUCKER	RA	RG 84054		SAN JUAN PUEBLO	Shallow		36	21N	08E	405162	3986364

Record Count: 1

POD Search:

POD Number: RG 84054

Sorted by: File Number

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
RG 03067	NRG	MUN	2780.26	CITY OF ESPANOLA	RA	RG 03067 S15		SAN JUAN PUEBLO GRANT	Shallow	3 3	4	27	21N	08E	402665	3986450

Record Count: 1

POD Search:

POD Number: RG 03067 S15

Sorted by: File Number

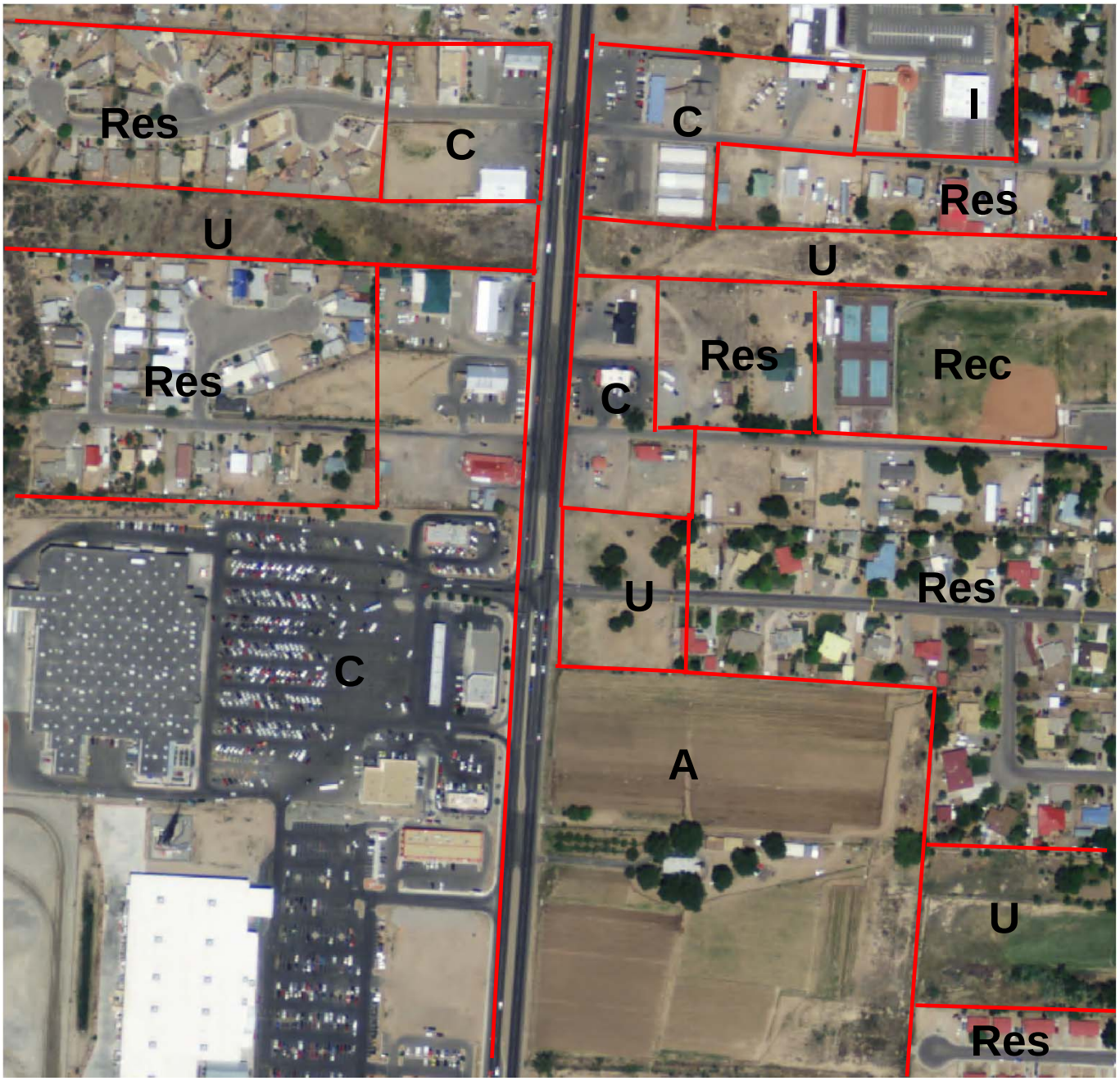
pod_basin	pod_nbr	pod_suffix	basin	nbr	suffix	use
RG	76868	POD1	RG	76868		MUL
RG	52608		RG	52608		MUL
RG	66129		RG	66129		DOM
RG	77591		RG	77591		DOM
RG	01466		RG	01466		SUB
RG	76869		RG	76869		DOM
RG	24956		RG	24956		DOM
RG	80402		RG	80402		DOM
RG	83067	POD2	RG	83067		IRR
RG	84619		RG	84619		DOM
RG	27387		RG	27387		DOM
RG	22107		RG	22107		DOM
RG	44652		RG	44652		DOM
RG	37725		RG	37725		DOM
RG	26470		RG	26470		SAN
RG	89602	POD1	RG	89602		DOM
RG	33637		RG	33637		SAN
RG	33637		RG	33637	A	IRR
RG	72675		RG	72675		DOM
RG	84475		RG	84475		DOM
RG	29648		RG	29648		DOM
RG	59284		RG	59284		DOM
RG	91232	POD1	RG	91232		DOM
RG	84054		RG	84054		
RG	72893		RG	72893		DOM
RG	07545		RG	07545		DOM
RG	80748		RG	80748		DOM
RG	65546		RG	65546		DOM
RG	90533	POD1	RG	90533		DOM
RG	74576		RG	74576		DOM
RG	89090	POD1	RG	89090		DOM
RG	23007		RG	23007		DOM
RG	40094		RG	40094		DOM
RG	77673		RG	77673		DOM
RG	53637		RG	53637		DOM
RG	35545		RG	35545		DOM
RG	67310		RG	67310		DOM
RG	60888		RG	60888		DOM
RG	72007		RG	72007		DOM
RG	24308		RG	24308		DOM
RG	75935		RG	75935		DOM
RG	57222		RG	57222		DOM
RG	23157		RG	23157		DOM
RG	03067	S15	RG	03067		MUN
RG	51260		RG	51260		DOM
RG	88976	POD1	RG	88976		DOM

RG	91036	POD1	RG	91036		DOM
RG	65165		RG	65165		DOM
RG	73804		RG	73804		DOM
RG	92782	POD1	RG	92782		DOM
RG	85624		RG	85624		DOM

W.A.T.E.R.S Use Codes

Use Code	Use Description
AGR	AGRICULTURE OTHER THAN IRRIGATION
AUG	AUGMENTATION WELL
BPW	BRINE PRODUCTION WELL
CEM	CEMETERY
CLS	CLOSED FILE
COM	COMMERCIAL
CON	CONSTRUCTION
CPS	CATHODIC PROTECTION WELL
DAI	DAIRY OPERATION
DCN	DOMESTIC CONSTRUCTION
DEW	DEWATERING WELL
DOL	72-12-1 DOMESTIC AND LIVESTOCK WATERING
DOM	72-12-1 DOMESTIC ONE HOUSEHOLD
EXP	EXPLORATION
FCD	FLOOD CONTROL
FGP	FISH AND GAME PROPOGATION
FPO	FEED PEN OPERATION
GEO	GEOTHERMAL BOREHOLES
HWY	HIGHWAY CONSTRUCTION
IND	INDUSTRIAL
INJ	INJECTION
IRR	IRRIGATION
MDW	COMMUNITY TYPE USE - MDWCA, PRIVATE OR COMMERCIAL SUPPLIED
MFG	MANUFACTURING
MIL	MILITARY - MILITARY INSTALLATIONS
MIN	MINING OR MILLING OR OIL
MOB	MOBILE HOME PARKS
MON	MONITORING WELL
MPP	MEAT PACKING PLANT
MUL	72-12-1 MULTIPLE DOMESTIC HOUSEHOLDS
MUN	MUNICIPAL - CITY OR COUNTY SUPPLIED WATER
N07	NO PRE 1907 WATER RIGHT EXISTS ON THIS LAND.
NON	NON-PROFIT ORGANIZATIONAL USE
NOT	NO USE OF RIGHT OR POD
NRT	NO RIGHT
OBS	OBSERVATION
OFM	OIL FIELD MAINTENANCE
OIL	OIL PRODUCTION
PDL	NON 72-12-1 DOMESTIC & LIVESTOCK

Use Code	Use Description
PDM	NON 72-12-1 DOMESTIC
PLS	NON 72-12-1 LIVESTOCK WATERING
PMH	NON 72-12-1 MULTIPLE HOUSEHOLD USE
POL	POLLUTION CONTROL WELL
POU	POULTRY AND EGG OPERATION
PPP	PETROLEUM PROCESSING PLANT
PRO	72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
PUB	72-12-1 CONSTRUCTION OF PUBLIC WORKS
REC	RECREATION
SAN	72-12-1 SANITARY IN CONJUNCTION WITH A COMMERCIAL USE
SCH	SCHOOL USE - PUBLIC, PRIVATE, PAROCHIAL, & UNIVERSITIES
SRO	SECONDARY RECOVERY OF OIL
STK	72-12-1 LIVESTOCK WATERING
STO	STORAGE
STR	STRATEGIC WATER RESERVE
SUB	SUBDIVISION
SWR	STACKED WATER RIGHT
TBD	TO BE DETERMINED
UTL	PUBLIC UTILITY



Legend:
C – Commercial land use
Res – Residential land use
Rec – Recreational land use
U – Undeveloped land
I – Institutional land use
A – Agricultural land use

Aerial Photograph Source: UNM Earth Data Analysis Center, 2013

N

Project Manager: MRH	Project No. 66127029	Terracon Consulting Engineers & Scientists 4905 Hawkins, NE Albuquerque, New Mexico 87109 PH. (505) 797-4287 FAX. (505) 797-4288	LAND USE MAP FAIRVIEW STATION 1626 NORTH RIVERSIDE DRIVE ESPANOLA, RIO ARRIBA COUNTY, NEW MEXICO	EXHIBIT 12
Drawn by: JAS	Scale: 1 ≅ 300'			
Checked by: MRH	File Name:			
Approved by: MRH	Date: 3/6/13			

APPENDIX C

Boring Logs and Well Permits

BORING LOG NO. B-1/MW-1

PROJECT: Former Fairview Station

CLIENT: Ms. Lucile Roybal, PE
Albuquerque, New Mexico

SITE: 1626 North Riverside Drive
Espanola, New Mexico

LOCATION NE side of lot

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS
		FILL - WELL GRADED SAND WITH GRAVEL, brown, no odor, loose, moist					
		-becomes dry for 4 feet					PID 0
			5				PID 0
							PID 1.1
			10				PID 0
10.5		-Hydrocarbon order					
		LEAN CLAY WITH SILT, brown, strong odor, stiff, dense, moist (Native)					PID 188
		-becomes sandy for 12-inches		▼			
			15			36	PID 4000+
18.5							PID 4000+
		WELL GRADED SAND WITH GRAVEL, black and tan, strong odor, loose, wet		▽			
			20				PID 4000+
		-becomes light brown					PID 318
			25				PID 118
28.0							
		Boring Terminated at 28 Feet					

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Hollow stem auger

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Encountered While Drilling*

▼ *Static level on 2/27/2013*

Terracon
4905 Hawkins, NE
Albuquerque, New Mexico

Boring Started: 1/31/2013 | Boring Completed: 1/31/2013

Drill Rig: CME-75 | Driller: Enviro-drill

Project No.: 66127029 | Exhibit: B-1

BORING LOG NO. B-2/MW-2

PROJECT: Former Fairview Station

CLIENT: Ms. Lucile Roybal, PE
Albuquerque, New Mexico

SITE: 1626 North Riverside Drive
Espanola, New Mexico

LOCATION North end of dispenser island

DEPTH	GRAPHIC LOG		WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
		WELL GRADED SAND, brown, weak odor, loose, moist			PID 26.3
					PID 65.5
5.0		**LEAN CLAY**, with silt, brown, moderate odor, stiff, moist			
					PID 848
		-hydrocarbon odor becomes strong			PID 2810
					PID 4000+
		-start of a white calcareous fissure -becomes crumbly	▼		PID 1930
16.0		-6-inches of black clay			
		SILT, with clay, brown, strong odor, very stiff, moist, crumbly			PID 4000+
20.0			▽		
		WELL GRADED SAND WITH GRAVEL, brown, strong odor, very loose, saturated, intermitten gravel 1- to 3-inches			PID 4000+
28.0		***Boring Terminated at 28 Feet***			

DEPTH (Ft.): 5, 10, 15, 20, 25

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Hollow stem auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While Drilling*

▼ *Static level on 2/27/2013*

Terracon
4905 Hawkins, NE
Albuquerque, New Mexico

Boring Started: 1/31/2013 | Boring Completed: 1/31/2013

Drill Rig: CME-75 | Driller: Enviro-drill

Project No.: 66127029 | Exhibit: B-2

BORING LOG NO. B-3/MW-3

PROJECT: Former Fairview Station

CLIENT: Ms. Lucile Roybal, PE
Albuquerque, New Mexico

SITE: 1626 North Riverside Drive
Espanola, New Mexico

LOCATION South of dispenser island

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
		WELL GRADED SAND WITH GRAVEL, brown, no odor, loose, moist				PID 37.3
						PID 66.1
5.0			5			PID 1.2
		LEAN CLAY, brown and gray, weak odor, stiff, moist				PID 360
		strong odor, -becomes sandy clay to 12.5-feet	10			PID 871
						PID 326
			15	▼		PID 4000+
					■	PID 4000+
20.0			20	▽		
		WELL GRADED SAND WITH GRAVEL, brown with dark green, strong odor, loose, wet				
		-becomes large grain sand with gravel, dark gray				PID 818
			25			PID 247
		-becomes fine grain sand, brown, saturated				
28.0						PID 1700
		Boring Terminated at 28 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Hollow stem auger

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While Drilling*

▼ *Static level on 2/27/2013*

Terracon
4905 Hawkins, NE
Albuquerque, New Mexico

Boring Started: 2/1/2013 | Boring Completed: 2/1/2013

Drill Rig: CME-75 | Driller: Enviro-drill

Project No.: 66127029 | Exhibit: B-3

BORING LOG NO. B-4

PROJECT: Former Fairview Station

CLIENT: Ms. Lucile Roybal, PE
Albuquerque, New Mexico

SITE: 1626 North Riverside Drive
Espanola, New Mexico

LOCATION North of former tank holding

GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	0.0	**WELL GRADED SAND WITH GRAVEL**, brown, no odor, loose, moist				PID 18.9
	5.0	**SILT**, brown and gray, weak odor, medium stiff, moist with cacareous fissure	5			PID 132
	7.5	**LEAN CLAY**, with silt, brown, no odor, medium stiff, moist with cacareous fissure				PID 329
		-becomes clay with sand	10			PID 464
		-becomes clay with silt, with clacareous fissure	15			PID 45
						PID 2200
	20.0	**SILT**, with clay, brown, strong odor, moist with calcareous fissure	20			PID 4000+
						PID 4000+
	25.0	**WELL GRADED SAND WITH GRAVEL**, brown, moderate odor, saturated	25	▽		PID 242
	30.0	***Boring Terminated at 30 Feet***	30			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Hollow stem auger

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While Drilling*

Terracon
4905 Hawkins, NE
Albuquerque, New Mexico

Boring Started: 2/1/2013 | Boring Completed: 2/1/2013

Drill Rig: CME-75 | Driller: Enviro-drill

Project No.: 66127029 | Exhibit: B-4

BORING LOG NO. B-5

PROJECT: Former Fairview Station

CLIENT: Ms. Lucile Roybal, PE
Albuquerque, New Mexico

SITE: 1626 North Riverside Drive
Espanola, New Mexico

LOCATION Southeast portion of site

DEPTH		FIELD TEST RESULTS
0.5	**SILT**, trace sand, brown, no odor, loose, moist	
	LEAN CLAY, brown, no odor, stiff, moist	PID 28.4
5		PID 8.9
	-becomes clay with fine sand	PID 152
	-becomes lean clay	
10.0	**SILT**, brown, no odor, soft, moist	PID 30.9
10		PID 8.9
15.0		PID 5.8
15	**LEAN CLAY**, brown, no odor, stiff, moist	
16.5	**SILT**, brown, no odor, stiff, moist with calcareous fissure	PID 17.4
20.0		PID 15.5
20	**WELL GRADED SAND WITH GRAVEL**, gray and black, moderate odor, loose, saturated	
	-staining in sand for 3-inches	PID 2670
25.0		PID 17.5
25	***Boring Terminated at 25 Feet***	

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Hollow stem auger

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While Drilling*

Terracon
4905 Hawkins, NE
Albuquerque, New Mexico

Boring Started: 2/1/2013 | Boring Completed: 2/1/2013

Drill Rig: CME-75 | Driller: Enviro-drill

Project No.: 66127029 | Exhibit: B-5

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
DISTRICT VI - SANTA FE

Scott A. Verhines, P.E.
State Engineer

CONCHA ORTIZ Y PINO BLDG.
POST OFFICE BOX 25102
130 SOUTH CAPITOL
SANTA FE, NEW MEXICO 87504-5102
(505) 827-6091
FAX: (505) 827-3806

January 4, 2013

Joe and Lucille Roybal
2312 via Seville CT NW
Albuquerque, NM 87104

RE: Permits to Drill Monitoring Wells, OSE File No. RG-93769 (PODs 1 thru 3), Jose Roybal, Rio Arriba County

Greetings,

Please find enclosed your original copies of Permits to Drill Monitoring Wells which have been **approved**. Please refer to the specific conditions of approval attached to the permits. These permits for groundwater remediation are of indeterminate length and will not automatically expire. Sampling and testing restrictions pertain to water quantity considerations and not the proposed use of the well for monitoring of contaminants over the life of the permit.

If you are aggrieved by this decision, you should so advise this office in writing before the expiration of thirty (30) days after receipt of this letter and request that the previous action be set aside and that a date for a hearing be set by the State Engineer. Request for hearing may be filed by facsimile, provided the original request is mailed and received within 24 hours of the facsimile. The applicant must indicate the date and time of transmission of the facsimile and also provide a cover letter confirming that the original will be mailed within 24 hours.

Please refer to the file number in any future dealings with this Office. If you have additional questions or further information is required, please do not hesitate to contact the District 6 office at (505) 827-6120 in Santa Fe.

Sincerely,

Antonio G. Trujillo
Water Rights Division
District 6, Santa Fe

File No.

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: Lucille Roybal	Name: Jose C. Roybal
Contact or Agent: Lucille Roybal check here if Agent ☐	Contact or Agent: Jose C. Roybal check here if Agent ☐
Mailing Address: 2312 Via Seville Ct. NW	Mailing Address: ← Same
City: Albuquerque	City:
State: New Mexico Zip Code: 87104	State: Zip Code:
Phone: 505-980-4678 ☐ Home ☒ Cell Phone (Work): 505-284-6655	Phone: 505-467-9120 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): ~~lmroybal@sandia.gov~~ lmroyba @ sandia. gov	E-mail (optional):

OFFICE OF STATE ENGINEER
SANTA FE, NEW MEXICO
2012 DEC 18 AM 11:20

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

File Number:	Trn Number:
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.
MW-1	36°01'0.22"	106°03'50.25"	
MW-2	36°0'59.91"	106°03'50.19"	
MW-3	36°0'59.65"	106°03'50.14"	

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 property at the southeast corner of North Riverside Drive (NM SR 68) and Calle Ranchitos, Espanola, NM. The site was occupied by a gas station.

Well is on land owned by: Jose C. Roybal

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ☒ No
If yes, how many _____ All 3 wells will have the same construction

Approximate depth of well (feet): 40	Outside diameter of well casing (inches): 2
Driller Name: Enviro-Drill	Driller License Number: WD-1186

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Three wells will be installed to evaluate potential releases to groundwater from a historical on-site gas station. The wells will be monitored for a period of at least one year.

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number:	Trn Number:

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)), Jose C Roybal, Lucille Roybal
Print Name(s)

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

Jose C Roybal
Applicant Signature

Lucille Roybal
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 3 day of January 20 13, for the State Engineer,

Scott Verhines, PE, State Engineer

By: [signature] Antonio Trujillo
Signature Print

Title: Water Resource Spec
Print

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

File Number:	Trn Number:

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
DISTRICT VI – SANTA FE

Scott A. Verhines, P.E.
State Engineer

CONCHA ORTIZ Y PINO BLDG.
POST OFFICE BOX 25102
130 SOUTH CAPITOL
SANTA FE, NEW MEXICO 87504-5102
(505) 827-6091
FAX: (505) 827-3806

Permittee: Jose and Lucille Roybal
2312 via Seville CT NW
Albuquerque, NM 87104

Permit Number: RG-93769, PODs 1-3

Application File Date: January 4, 2013

CONDITIONS OF APPROVAL
RG-93769 – PODS 1-3

1. The well is to be drilled by a driller licensed as a water well driller in the State of New Mexico in accordance with *Section 72-12-12 NMSA*.

2. Except for one test period, not to exceed 72 hours, the well shall not be pumped or equipped without first obtaining a valid permit to use said well.

3. This application is approved for drilling of exploratory well RG-93769 POD 1-3 pursuant to a NMED required groundwater monitoring well network. Failure to submit well logs within one year from the date of approval herein shall result in cancellation or expiration of this permit. These wells may not be used for any other purpose without authorization of a permit.

4. The permittee shall consider the surface drainage, access for maintenance and repair, and proximity of the well site to other water wells in the area prior to drilling. All wells drilled under this permit must be located at least 50 feet away from wells of other ownership. The permittee shall comply with federal, state, and local regulations concerning setbacks from structures and property lines.

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

6. The well driller shall submit, within 20 days of drilling and pump-testing, to the State Engineer Office, Water Rights Division District VI, Santa Fe, New Mexico, logs of all holes drilled and all holes to be filled, and any test data results within 20 days of testing.

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

8. All wells drilled under this permit shall be maintained in a manner acceptable to the State Engineer so as to prevent groundwater contamination or other safety hazards.

Witness my hand and seal this **4TH day of January, 2013.**

Scott Verhines, P.E.
NEW MEXICO STATE ENGINEER

by: _____
Antonio Trujillo Jr.
Water Rights Division

APPENDIX D

Photographic Documentation

Photo #1 Advancement of soil boring B-1.

Photo #2 Advancement of soil boring B-2.

Photo #3 Advancement of soil boring B-3.

Photo #4 Advancement of soil boring B-5.

Photo #5 Typical view of PSH recovered from monitoring well MW-2.

Photo #6 View of drums of soil cuttings staged on site.

APPENDIX E

Summary Tables
Table 1 – Soil Sample Analytical Results
Table 2 – Groundwater Sample Analytical Results
Table 3 - PSH 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	15'	01/31/13	27	84	44	170	<2.5	<2.5	<2.5	NA[2]	NA	<48	350	1,800
B-2	12.5'	01/31/13	6.0	19	12	51	2.5	<1.0	<1.0	NA	NA	<50	64	540
B-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
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**											
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*		

TABLE 3
Groundwater Gauging 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 Product (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)
MW-1	2/27/2013	28	13-28	5622.71	14.40	14.06	0.34	5608.56
MW-2	2/27/2013	28	13-28	5622.99	18.56	13.11	5.45	5608.40
MW-3	2/27/2013	28	13-28	5623.02	16.69	13.80	2.89	5608.44

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 F

Laboratory Analytical Reports

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

February 18, 2013

Mark Hillier

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

RE: Facility #28779 OrderNo.: 1302043

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/1/2013 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. 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. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: B-1 (15')
Project: Facility #28779
Collection Date: 1/31/2013 12:30:00 PM
Lab ID: 1302043-001
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	350	9.7		mg/Kg	1	2/5/2013 12:16:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/5/2013 12:16:49 PM
Surr: DNOP	94.4	72.4-120		%REC	1	2/5/2013 12:16:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	1800	500		mg/Kg	100	2/5/2013 12:25:50 PM
Surr: BFB	89.4	84-116		%REC	100	2/5/2013 12:25:50 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	ND	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
Benzene	27	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
1,2-Dichloroethane (EDC)	ND	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
Toluene	84	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
Ethylbenzene	44	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
Xylenes, Total	170	5.0		mg/Kg	50	2/4/2013 3:48:37 PM
1,2-Dibromoethane (EDB)	ND	2.5		mg/Kg	50	2/4/2013 3:48:37 PM
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%REC	50	2/4/2013 3:48:37 PM
Surr: 4-Bromofluorobenzene	89.8	70-130		%REC	50	2/4/2013 3:48:37 PM
Surr: Dibromofluoromethane	95.1	70-130		%REC	50	2/4/2013 3:48:37 PM
Surr: Toluene-d8	91.7	70-130		%REC	50	2/4/2013 3:48:37 PM

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
P	Sample pH greater than 2	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: B-2 (12.5')
Project: Facility #28779
Collection Date: 1/31/2013 11:00:00 AM
Lab ID: 1302043-002
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	64	9.9		mg/Kg	1	2/5/2013 12:38:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/5/2013 12:38:27 PM
Surr: DNOP	100	72.4-120		%REC	1	2/5/2013 12:38:27 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	540	100		mg/Kg	20	2/5/2013 1:23:13 PM
Surr: BFB	123	84-116	S	%REC	20	2/5/2013 1:23:13 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	2.5	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
Benzene	6.0	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
Toluene	19	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
Ethylbenzene	12	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
Xylenes, Total	51	2.0		mg/Kg	20	2/4/2013 4:16:51 PM
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	2/4/2013 4:16:51 PM
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	20	2/4/2013 4:16:51 PM
Surr: 4-Bromofluorobenzene	90.3	70-130		%REC	20	2/4/2013 4:16:51 PM
Surr: Dibromofluoromethane	97.4	70-130		%REC	20	2/4/2013 4:16:51 PM
Surr: Toluene-d8	93.5	70-130		%REC	20	2/4/2013 4:16:51 PM

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
P	Sample pH greater than 2	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: B-3 (17.5')
Project: Facility #28779
Collection Date: 2/1/2013 11:10:00 AM
Lab ID: 1302043-003
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	85	9.8		mg/Kg	1	2/5/2013 1:00:13 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/5/2013 1:00:13 PM
Surr: DNOP	101	72.4-120		%REC	1	2/5/2013 1:00:13 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	970	200		mg/Kg	40	2/5/2013 2:20:51 PM
Surr: BFB	112	84-116		%REC	40	2/5/2013 2:20:51 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	1.6	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
Benzene	21	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
Toluene	48	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
Ethylbenzene	18	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
Xylenes, Total	77	2.0		mg/Kg	20	2/4/2013 4:45:06 PM
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	2/4/2013 4:45:06 PM
Surr: 1,2-Dichloroethane-d4	94.4	70-130		%REC	20	2/4/2013 4:45:06 PM
Surr: 4-Bromofluorobenzene	91.8	70-130		%REC	20	2/4/2013 4:45:06 PM
Surr: Dibromofluoromethane	94.4	70-130		%REC	20	2/4/2013 4:45:06 PM
Surr: Toluene-d8	93.3	70-130		%REC	20	2/4/2013 4:45:06 PM

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
P	Sample pH greater than 2	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: B-4 (22.5')
Project: Facility #28779
Collection Date: 2/1/2013 1:30:00 PM
Lab ID: 1302043-004
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	830	10		mg/Kg	1	2/5/2013 1:21:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/5/2013 1:21:48 PM
Surr: DNOP	99.1	72.4-120		%REC	1	2/5/2013 1:21:48 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	2300	500		mg/Kg	100	2/5/2013 3:18:22 PM
Surr: BFB	118	84-116	S	%REC	100	2/5/2013 3:18:22 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **ELS**
Lead	2.8	1.2		mg/Kg	5	2/8/2013 10:44:44 AM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	13	1.0		mg/Kg	50	2/7/2013 2:25:45 PM
1-Methylnaphthalene	9.2	1.0		mg/Kg	50	2/7/2013 2:25:45 PM
2-Methylnaphthalene	18	1.0		mg/Kg	50	2/7/2013 2:25:45 PM
Acenaphthylene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Acenaphthene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Fluorene	0.079	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Phenanthrene	0.11	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Anthracene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Fluoranthene	0.026	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Pyrene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Benz(a)anthracene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Chrysene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Benzo(b)fluoranthene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Benzo(k)fluoranthene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Benzo(a)pyrene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Dibenz(a,h)anthracene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Benzo(g,h,i)perylene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Indeno(1,2,3-cd)pyrene	ND	0.020		mg/Kg	1	2/7/2013 1:19:53 PM
Surr: Benzo(e)pyrene	91.0	44.9-129		%REC	1	2/7/2013 1:19:53 PM
Surr: N-hexadecane	111	45.4-126		%REC	1	2/7/2013 1:19:53 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	2.0	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
Benzene	13	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
Toluene	77	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
Ethylbenzene	54	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
Xylenes, Total	240	10		mg/Kg	100	2/5/2013 3:38:03 PM
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	2/4/2013 5:13:17 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	20	2/4/2013 5:13:17 PM
Surr: 4-Bromofluorobenzene	84.1	70-130		%REC	20	2/4/2013 5:13:17 PM
Surr: Dibromofluoromethane	101	70-130		%REC	20	2/4/2013 5:13:17 PM

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
P	Sample pH greater than 2	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: B-4 (22.5')
Project: Facility #28779
Collection Date: 2/1/2013 1:30:00 PM
Lab ID: 1302043-004
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Surr: Toluene-d8	93.3	70-130		%REC	20	2/4/2013 5:13:17 PM

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
	P	Sample pH greater than 2	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: B-5 (7.5')
Project: Facility #28779
Collection Date: 2/1/2013 3:00:00 PM
Lab ID: 1302043-005
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **MMD**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/5/2013 1:43:31 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/5/2013 1:43:31 PM
Surr: DNOP	102	72.4-120		%REC	1	2/5/2013 1:43:31 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/5/2013 4:15:49 PM
Surr: BFB	102	84-116		%REC	1	2/5/2013 4:15:49 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
Benzene	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
Toluene	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/5/2013 4:06:26 PM
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	2/5/2013 4:06:26 PM
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%REC	1	2/5/2013 4:06:26 PM
Surr: 4-Bromofluorobenzene	92.4	70-130		%REC	1	2/5/2013 4:06:26 PM
Surr: Dibromofluoromethane	95.0	70-130		%REC	1	2/5/2013 4:06:26 PM
Surr: Toluene-d8	94.3	70-130		%REC	1	2/5/2013 4:06:26 PM

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
P	Sample pH greater than 2	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: B-5 (18'-19')
Project: Facility #28779
Collection Date: 2/1/2013 3:20:00 PM
Lab ID: 1302043-006
Matrix: SOIL
Received Date: 2/1/2013 4:37:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
WALKLEY-BLACK METHOD: FOC						Analyst: **TAF**
FOC	ND	0.10		% C	1	2/16/2013 10:36:00 AM

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
P	Sample pH greater than 2	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#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **MB-5946**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **5946**	RunNo: **8445**
Prep Date: **2/1/2013**	Analysis Date: **2/5/2013**	SeqNo: **243401** 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	9.4		10.00		94.4	72.4	120			

Sample ID **LCS-5946**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **5946**	RunNo: **8445**
Prep Date: **2/1/2013**	Analysis Date: **2/5/2013**	SeqNo: **243402** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.6	47.4	122			
Surr: DNOP	4.5		5.000		89.3	72.4	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS**	Batch ID: **R8462**	RunNo: **8462**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **243840** 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	1000		1000		99.5	84	116			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R8462**	RunNo: **8462**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **243841** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	74	117			
Surr: BFB	1000		1000		105	84	116			

Sample ID **1302043-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **B-1 (15')**	Batch ID: **R8462**	RunNo: **8462**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **243843** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4100	500	2104	1843	107	70	130			
Surr: BFB	96000		84140		115	84	116			

Sample ID **1302043-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **B-1 (15')**	Batch ID: **R8462**	RunNo: **8462**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **243844** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4400	500	2104	1843	122	70	130	7.67	22.1	
Surr: BFB	98000		84140		117	84	116	0	0	S

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R8433**	RunNo: **8433**
Prep Date:	Analysis Date: **2/4/2013**	SeqNo: **242973** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.6	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.1	70	130			
Surr: Toluene-d8	0.45		0.5000		90.0	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **R8433**	RunNo: **8433**
Prep Date:	Analysis Date: **2/4/2013**	SeqNo: **242985** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.050	1.000	0	85.7	70	130			
Toluene	0.92	0.050	1.000	0	92.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.9	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.9	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.3	70	130			
Surr: Toluene-d8	0.46		0.5000		91.7	70	130			

Sample ID **1302043-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **B-1 (15')**	Batch ID: **R8433**	RunNo: **8433**
Prep Date:	Analysis Date: **2/4/2013**	SeqNo: **243004** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	64	2.5	42.07	27.23	88.3	80.9	118			
Toluene	120	2.5	42.07	83.51	83.6	69.5	119			
Surr: 1,2-Dichloroethane-d4	20		21.04		95.8	70	130			
Surr: 4-Bromofluorobenzene	19		21.04		88.0	70	130			
Surr: Dibromofluoromethane	20		21.04		92.9	70	130			
Surr: Toluene-d8	19		21.04		91.7	70	130			

Sample ID **1302043-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **B-1 (15')**	Batch ID: **R8433**	RunNo: **8433**
Prep Date:	Analysis Date: **2/4/2013**	SeqNo: **243005** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	65	2.5	42.07	27.23	88.9	80.9	118	0.348	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **1302043-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **B-1 (15')**	Batch ID: **R8433**	RunNo: **8433**
Prep Date:	Analysis Date: **2/4/2013**	SeqNo: **243005** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	120	2.5	42.07	83.51	81.2	69.5	119	0.830	20	
Surr: 1,2-Dichloroethane-d4	20		21.04		96.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	18		21.04		86.5	70	130	0	0	
Surr: Dibromofluoromethane	21		21.04		98.0	70	130	0	0	
Surr: Toluene-d8	19		21.04		92.5	70	130	0	0	

Sample ID **5ml-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R8468**	RunNo: **8468**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **244112** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.3	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.2	70	130			
Surr: Toluene-d8	0.47		0.5000		94.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **R8468**	RunNo: **8468**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **244113** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.050	1.000	0	86.4	70	130			
Toluene	0.95	0.050	1.000	0	94.8	80	120			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.4	70	130			
Surr: Toluene-d8	0.48		0.5000		95.5	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **mb-6010**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBS**	Batch ID: **6010**	RunNo: **8516**
Prep Date: **2/6/2013**	Analysis Date: **2/7/2013**	SeqNo: **245332** 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: Benzo(e)pyrene	0.37		0.3300		113	44.9	129			
Surr: N-hexadecane	1.6		1.460		113	45.4	126			

Sample ID **lcs-6010**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS**	Batch ID: **6010**	RunNo: **8516**
Prep Date: **2/6/2013**	Analysis Date: **2/7/2013**	SeqNo: **245333** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.25	0.020	0.3300	0	76.4	52	107			
1-Methylnaphthalene	0.27	0.020	0.3300	0	82.7	54.7	112			
2-Methylnaphthalene	0.25	0.020	0.3300	0	75.8	50.2	112			
Acenaphthylene	0.29	0.020	0.3300	0	86.7	53.3	111			
Acenaphthene	0.28	0.020	0.3300	0	85.4	50	120			
Fluorene	0.28	0.020	0.3300	0	86.0	50.8	115			
Phenanthrene	0.29	0.020	0.3300	0	87.3	54.1	124			
Anthracene	0.28	0.020	0.3300	0	84.8	53.9	117			
Fluoranthene	0.30	0.020	0.3300	0	92.4	54.5	112			
Pyrene	0.26	0.020	0.3300	0	78.4	51.2	113			
Benz(a)anthracene	0.29	0.020	0.3300	0	89.2	54.9	109			
Chrysene	0.27	0.020	0.3300	0	82.8	49	112			
Benzo(b)fluoranthene	0.27	0.020	0.3300	0	80.7	58.2	118			
Benzo(k)fluoranthene	0.28	0.020	0.3300	0	86.0	53.5	118			
Benzo(a)pyrene	0.24	0.020	0.3300	0	72.6	50.1	118			

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **lcs-6010**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS**	Batch ID: **6010**	RunNo: **8516**
Prep Date: **2/6/2013**	Analysis Date: **2/7/2013**	SeqNo: **245333** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	0.27	0.020	0.3300	0	81.2	59.5	113			
Benzo(g,h,i)perylene	0.29	0.020	0.3300	0	87.0	56.5	117			
Indeno(1,2,3-cd)pyrene	0.29	0.020	0.3300	0	88.3	58.5	114			
Surr: Benzo(e)pyrene	0.26		0.3300		79.7	44.9	129			
Surr: N-hexadecane	1.2		1.460		83.9	45.4	126			

Sample ID **1302043-004Ams**	SampType: **MS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **B-4 (22.5')**	Batch ID: **6010**	RunNo: **8516**
Prep Date: **2/6/2013**	Analysis Date: **2/7/2013**	SeqNo: **245337** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthylene	0.33	0.020	0.3303	0	99.8	56.5	101			
Acenaphthene	0.35	0.020	0.3303	0	106	57	107			
Fluorene	0.35	0.020	0.3303	0.07860	83.2	61.6	100			
Phenanthrene	0.41	0.020	0.3303	0.1144	88.8	68.5	115			
Anthracene	0.34	0.020	0.3303	0	103	62.5	117			
Fluoranthene	0.36	0.020	0.3303	0.02609	101	59.5	112			
Pyrene	0.33	0.020	0.3303	0.02007	95.1	55.3	109			
Benz(a)anthracene	0.35	0.020	0.3303	0.01104	102	52.3	115			
Chrysene	0.33	0.020	0.3303	0.006355	97.0	52.3	113			
Benzo(b)fluoranthene	0.31	0.020	0.3303	0	93.9	47.1	125			
Benzo(k)fluoranthene	0.32	0.020	0.3303	0	97.3	46.9	125			
Benzo(a)pyrene	0.27	0.020	0.3303	0	82.6	55.9	115			
Dibenz(a,h)anthracene	0.31	0.020	0.3303	0	94.6	59.4	112			
Benzo(g,h,i)perylene	0.33	0.020	0.3303	0	99.3	50.2	120			
Indeno(1,2,3-cd)pyrene	0.33	0.020	0.3303	0	101	54.2	118			
Surr: Benzo(e)pyrene	0.26		0.3303		79.1	44.9	129			
Surr: N-hexadecane	1.5		1.461		99.5	45.4	126			

Sample ID **1302043-004Amsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **B-4 (22.5')**	Batch ID: **6010**	RunNo: **8516**
Prep Date: **2/6/2013**	Analysis Date: **2/7/2013**	SeqNo: **245338** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthylene	0.26	0.020	0.3296	0	78.8	56.5	101	23.8	20	R
Acenaphthene	0.30	0.020	0.3296	0	90.3	57	107	16.4	20	
Fluorene	0.30	0.020	0.3296	0.07860	68.4	61.6	100	15.0	20	
Phenanthrene	0.34	0.020	0.3296	0.1144	69.6	68.5	115	17.0	20	
Anthracene	0.29	0.020	0.3296	0	88.1	62.5	117	15.5	20	
Fluoranthene	0.29	0.020	0.3296	0.02609	81.5	59.5	112	19.7	20	
Pyrene	0.29	0.020	0.3296	0.02007	81.1	55.3	109	15.1	20	
Benz(a)anthracene	0.32	0.020	0.3296	0.01104	94.3	52.3	115	7.32	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID **1302043-004Amsd** SampType: **MSD** TestCode: **EPA Method 8270C: PAHs**

Client ID: **B-4 (22.5')** Batch ID: **6010** RunNo: **8516**

Prep Date: **2/6/2013** Analysis Date: **2/7/2013** SeqNo: **245338** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chrysene	0.28	0.020	0.3296	0.006355	84.0	52.3	113	14.2	20	
Benzo(b)fluoranthene	0.28	0.020	0.3296	0	84.2	47.1	125	11.1	20	
Benzo(k)fluoranthene	0.29	0.020	0.3296	0	89.0	46.9	125	9.13	20	
Benzo(a)pyrene	0.25	0.020	0.3296	0	77.4	55.9	115	6.80	20	
Dibenz(a,h)anthracene	0.29	0.020	0.3296	0	89.3	59.4	112	6.05	20	
Benzo(g,h,i)perylene	0.29	0.020	0.3296	0	87.0	50.2	120	13.5	20	
Indeno(1,2,3-cd)pyrene	0.31	0.020	0.3296	0	93.4	54.2	118	8.03	20	
Surr: Benzo(e)pyrene	0.24		0.3296		72.7	44.9	129	0	0	
Surr: N-hexadecane	1.3		1.458		86.2	45.4	126	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
- P Sample pH greater than 2
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID	**MB-6139**	SampType:	**MBLK**		TestCode:	**Walkley-Black Method: FOC**				
Client ID:	**PBS**	Batch ID:	**6139**		RunNo:	**8684**				
Prep Date:	**2/16/2013**	Analysis Date:	**2/16/2013**		SeqNo:	**249257**	Units:	**% C**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
FOC	ND	0.10								

Sample ID	**LCS-6139**	SampType:	**LCS**		TestCode:	**Walkley-Black Method: FOC**				
Client ID:	**LCSS**	Batch ID:	**6139**		RunNo:	**8684**				
Prep Date:	**2/16/2013**	Analysis Date:	**2/16/2013**		SeqNo:	**249258**	Units:	**% C**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
FOC	2.2	0.10	2.100	0	103	80	120			

Sample ID	**1302043-006AMS**	SampType:	**MS**		TestCode:	**Walkley-Black Method: FOC**				
Client ID:	**B-5 (18'-19')**	Batch ID:	**6139**		RunNo:	**8684**				
Prep Date:	**2/16/2013**	Analysis Date:	**2/16/2013**		SeqNo:	**249260**	Units:	**% C**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
FOC	2.2	0.10	2.100	0	105	75	125			

Sample ID	**1302043-006AMSD**	SampType:	**MSD**		TestCode:	**Walkley-Black Method: FOC**				
Client ID:	**B-5 (18'-19')**	Batch ID:	**6139**		RunNo:	**8684**				
Prep Date:	**2/16/2013**	Analysis Date:	**2/16/2013**		SeqNo:	**249261**	Units:	**% C**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
FOC	2.2	0.10	2.100	0	105	75	125	0.454	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302043**

18-Feb-13

Client: Terracon

Project: Facility #28779

Sample ID	**MB-6022**	SampType:	**MBLK**		TestCode:	**EPA Method 6010B: Soil Metals**				
Client ID:	**PBS**	Batch ID:	**6022**		RunNo:	**8523**				
Prep Date:	**2/7/2013**	Analysis Date:	**2/8/2013**		SeqNo:	**245476**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								

Sample ID	**LCS-6022**	SampType:	**LCS**		TestCode:	**EPA Method 6010B: Soil Metals**				
Client ID:	**LCSS**	Batch ID:	**6022**		RunNo:	**8523**				
Prep Date:	**2/7/2013**	Analysis Date:	**2/8/2013**		SeqNo:	**245477**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	25	0.25	25.00	0	100	80	120			

Sample ID	**1302043-004AMS**	SampType:	**MS**		TestCode:	**EPA Method 6010B: Soil Metals**				
Client ID:	**B-4 (22.5')**	Batch ID:	**6022**		RunNo:	**8523**				
Prep Date:	**2/7/2013**	Analysis Date:	**2/8/2013**		SeqNo:	**245965**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	23	1.3	24.29	2.803	84.9	75	125			

Sample ID	**1302043-004AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 6010B: Soil Metals**				
Client ID:	**B-4 (22.5')**	Batch ID:	**6022**		RunNo:	**8523**				
Prep Date:	**2/7/2013**	Analysis Date:	**2/8/2013**		SeqNo:	**245966**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	23	1.2	24.31	2.803	83.0	75	125	1.89	20	

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
P	Sample pH greater than 2	R	RPD 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: 1302043

Received by/date: AT 02/01/13

Logged By: **Anne Thorne** 2/1/2013 4:37:00 PM Anne Thorne

Completed By: **Anne Thorne** 2/4/2013 Anne Thorne

Reviewed By: MG 02/04/13

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. 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)

17. 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: _____

18. Additional remarks: per MH B-2 collection time is 1100 AT 02/04/13

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Not Present			

Chain-of-Custody Record

Client: Terracon

Mailing Address: 4905 Hawkins NE Alb, NM 87109

Phone #: 505-797-4287

email or Fax#: mrhiller@terracon.com

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

Accreditation
☒ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Facility #28779

Project #: 66127029

Project Manager: Mark Hiller

Sampler: MRH / JAS

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.6

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. 1302043	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 8260	PAH	fraction organic lambert		Air Bubbles (Y or N)
1/31/13	1230	S	B-1 (15')	(1) 8oz. (2) 20ml	methanol	-001			X									X				
1/31/13	1100	S	B-2 (12.5')	"	"	-002			X									X				
2/1/13	1110	S	B-3 (17.5')	"	"	-003			X									X				
2/1/13	1330	S	B-4 (22.5')	"		-004			X									X				
2/1/13	1500	S	B-5 (7.5')	"	"	-005			X									X				
2/1/13	1520	S	B-5 (18'-19')	(1) 4oz	—	-006														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/1/13	1637			2/1/13	1637
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Hot samples

Run PAH 8270 on highest DRO result

Run Lead 6010 on highest GRO result

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

February 18, 2013

Mark Hillier

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

RE: Fairview Station OrderNo.: 1302100

Dear Mark Hillier:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/4/2013 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. 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. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW 1-020413
Project: Fairview Station
Collection Date: 2/4/2013 1:50:00 PM
Lab ID: 1302100-001
Matrix: AQUEOUS
Received Date: 2/4/2013 4:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **MMD**
Diesel Range Organics (DRO)	10	1.0		mg/L	1	2/5/2013 6:49:28 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/5/2013 6:49:28 PM
Surr: DNOP	129	75.4-146		%REC	1	2/5/2013 6:49:28 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	140	25		mg/L	500	2/8/2013 5:59:29 PM
Surr: BFB	100	51.9-148		%REC	500	2/8/2013 5:59:29 PM
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**
Lead	0.0035	0.0010		mg/L	1	2/13/2013 3:03:48 PM
EPA METHOD 8270C: PAHS						Analyst: **JDC**
Naphthalene	630	12		µg/L	25	2/11/2013 2:03:10 PM
1-Methylnaphthalene	190	12		µg/L	25	2/11/2013 2:03:10 PM
2-Methylnaphthalene	350	12		µg/L	25	2/11/2013 2:03:10 PM
Acenaphthylene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Acenaphthene	1.4	0.50		µg/L	1	2/11/2013 1:36:43 PM
Fluorene	1.4	0.50		µg/L	1	2/11/2013 1:36:43 PM
Phenanthrene	1.3	0.50		µg/L	1	2/11/2013 1:36:43 PM
Anthracene	ND	0.75		µg/L	1	2/11/2013 1:36:43 PM
Fluoranthene	ND	0.75		µg/L	1	2/11/2013 1:36:43 PM
Pyrene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Benz(a)anthracene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Chrysene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Benzo(b)fluoranthene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Benzo(k)fluoranthene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Benzo(a)pyrene	ND	0.50		µg/L	1	2/11/2013 1:36:43 PM
Dibenz(a,h)anthracene	ND	0.75		µg/L	1	2/11/2013 1:36:43 PM
Benzo(g,h,i)perylene	ND	0.75		µg/L	1	2/11/2013 1:36:43 PM
Indeno(1,2,3-cd)pyrene	ND	1.0		µg/L	1	2/11/2013 1:36:43 PM
Surr: Benzo(e)pyrene	84.9	38-145		%REC	1	2/11/2013 1:36:43 PM
Surr: N-hexadecane	87.8	40-107		%REC	1	2/11/2013 1:36:43 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMP**
Benzene	16000	500		µg/L	500	2/6/2013 12:26:45 PM
Toluene	21000	500		µg/L	500	2/6/2013 12:26:45 PM
Ethylbenzene	3700	500		µg/L	500	2/6/2013 12:26:45 PM
Methyl tert-butyl ether (MTBE)	3900	500		µg/L	500	2/6/2013 12:26:45 PM
1,2-Dichloroethane (EDC)	64	10		µg/L	10	2/6/2013 3:49:30 AM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	2/6/2013 3:49:30 AM
Xylenes, Total	14000	1000		µg/L	500	2/6/2013 12:26:45 PM
Surr: 1,2-Dichloroethane-d4	85.4	70-130		%REC	10	2/6/2013 3:49:30 AM
Surr: 4-Bromofluorobenzene	74.9	69.5-130		%REC	10	2/6/2013 3:49:30 AM
Surr: Dibromofluoromethane	95.5	70-130		%REC	10	2/6/2013 3:49:30 AM

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
P	Sample pH greater than 2	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 1-020413
Project: Fairview Station
Collection Date: 2/4/2013 1:50:00 PM
Lab ID: 1302100-001
Matrix: AQUEOUS
Received Date: 2/4/2013 4:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **JMP**
Surr: Toluene-d8	93.4	70-130		%REC	10	2/6/2013 3:49:30 AM

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
P	Sample pH greater than 2	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#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **R8639**			RunNo: **8639**					
Prep Date:		Analysis Date: **2/13/2013**			SeqNo: **248218**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.5	85	115			

Sample ID	**MB**	SampType: **MBLK**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **R8639**			RunNo: **8639**					
Prep Date:		Analysis Date: **2/13/2013**			SeqNo: **248219**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID **MB-5993**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **PBW**	Batch ID: **5993**	RunNo: **8458**
Prep Date: **2/5/2013**	Analysis Date: **2/5/2013**	SeqNo: **243718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		124	75.4	146			

Sample ID **LCS-5993**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSW**	Batch ID: **5993**	RunNo: **8458**
Prep Date: **2/5/2013**	Analysis Date: **2/5/2013**	SeqNo: **243719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	92.9	64.4	132			
Surr: DNOP	0.61		0.5000		122	75.4	146			

Sample ID **LCSD-5993**	SampType: **LCSD**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSS02**	Batch ID: **5993**	RunNo: **8458**
Prep Date: **2/5/2013**	Analysis Date: **2/5/2013**	SeqNo: **243720** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.8	64.4	132	5.21	20	
Surr: DNOP	0.62		0.5000		123	75.4	146	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015B: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R8562**	RunNo:	**8562**					
Prep Date:		Analysis Date:	**2/8/2013**	SeqNo:	**246184**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.7	51.9	148			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015B: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R8562**	RunNo:	**8562**					
Prep Date:		Analysis Date:	**2/8/2013**	SeqNo:	**246185**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	73.2	124			
Surr: BFB	19		20.00		95.7	51.9	148			

Sample ID	**1302100-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 8015B: Gasoline Range**					
Client ID:	**MW 1-020413**	Batch ID:	**R8562**	RunNo:	**8562**					
Prep Date:		Analysis Date:	**2/8/2013**	SeqNo:	**246198**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	410	25	250.0	140.4	108	63.5	131			
Surr: BFB	9800		10000		98.4	51.9	148			

Sample ID	**1302100-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015B: Gasoline Range**					
Client ID:	**MW 1-020413**	Batch ID:	**R8562**	RunNo:	**8562**					
Prep Date:		Analysis Date:	**2/8/2013**	SeqNo:	**246199**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	380	25	250.0	140.4	96.4	63.5	131	7.33	16.7	
Surr: BFB	9800		10000		98.0	51.9	148	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID **5ml-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R8468**	RunNo: **8468**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **244083** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	69.5	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R8468**	RunNo: **8468**
Prep Date:	Analysis Date: **2/5/2013**	SeqNo: **244084** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	69.5	130			
Surr: Dibromofluoromethane	9.2		10.00		92.4	70	130			
Surr: Toluene-d8	9.6		10.00		95.5	70	130			

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R8501**	RunNo: **8501**
Prep Date:	Analysis Date: **2/6/2013**	SeqNo: **244978** 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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	69.5	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	9.1		10.00		90.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R8501**	RunNo: **8501**
Prep Date:	Analysis Date: **2/6/2013**	SeqNo: **244983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.9	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.1	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.5	69.5	130			
Surr: Dibromofluoromethane	9.7		10.00		97.3	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**
18-Feb-13

Client: Terracon
Project: Fairview Station

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R8501**	RunNo: **8501**
Prep Date:	Analysis Date: **2/6/2013**	SeqNo: **244983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.2		10.00		91.8	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID **mb-6043**	SampType: **MBLK**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **PBW**	Batch ID: **6043**	RunNo: **8576**
Prep Date: **2/8/2013**	Analysis Date: **2/11/2013**	SeqNo: **246623** 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: Benzo(e)pyrene	15		20.00		73.3	38	145			
Surr: N-hexadecane	70		87.60		79.7	40	107			

Sample ID **lcs-6043**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **6043**	RunNo: **8576**
Prep Date: **2/8/2013**	Analysis Date: **2/11/2013**	SeqNo: **246624** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	72.4	33.9	106			
1-Methylnaphthalene	16	0.50	20.00	0	79.3	36.3	111			
2-Methylnaphthalene	14	0.50	20.00	0	68.9	36.5	105			
Acenaphthylene	16	0.50	20.00	0	80.9	28.4	122			
Acenaphthene	16	0.50	20.00	0	81.0	32.7	118			
Fluorene	15	0.50	20.00	0	75.9	39.1	119			
Phenanthrene	16	0.50	20.00	0	82.3	47.1	119			
Anthracene	16	0.75	20.00	0	77.7	51.1	117			
Fluoranthene	15	0.75	20.00	0	76.5	40	132			
Pyrene	15	0.50	20.00	0	73.7	43.9	123			
Benz(a)anthracene	17	0.50	20.00	0	85.4	35	163			
Chrysene	16	0.50	20.00	0	78.4	45.9	119			
Benzo(b)fluoranthene	15	0.50	20.00	0	72.7	36.5	137			
Benzo(k)fluoranthene	17	0.50	20.00	0	82.9	37.1	143			
Benzo(a)pyrene	14	0.50	20.00	0	69.4	26.7	144			

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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1302100**

18-Feb-13

Client: Terracon

Project: Fairview Station

Sample ID **lcs-6043**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **6043**	RunNo: **8576**
Prep Date: **2/8/2013**	Analysis Date: **2/11/2013**	SeqNo: **246624** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	16	0.75	20.00	0	80.6	31	146			
Benzo(g,h,i)perylene	16	0.75	20.00	0	79.1	30.9	150			
Indeno(1,2,3-cd)pyrene	17	1.0	20.00	0	83.8	35.2	169			
Surr: Benzo(e)pyrene	13		20.00		63.1	38	145			
Surr: N-hexadecane	65		87.60		74.7	40	107			

Sample ID **lcsd-6043**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **6043**	RunNo: **8576**
Prep Date: **2/8/2013**	Analysis Date: **2/11/2013**	SeqNo: **246625** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	72.0	33.9	106	0.554	20	
1-Methylnaphthalene	16	0.50	20.00	0	78.3	36.3	111	1.27	20	
2-Methylnaphthalene	14	0.50	20.00	0	69.7	36.5	105	1.15	20	
Acenaphthylene	16	0.50	20.00	0	80.5	28.4	122	0.496	20	
Acenaphthene	18	0.50	20.00	0	88.3	32.7	118	8.62	20	
Fluorene	16	0.50	20.00	0	80.8	39.1	119	6.25	20	
Phenanthrene	15	0.50	20.00	0	74.6	47.1	119	9.82	20	
Anthracene	16	0.75	20.00	0	79.9	51.1	117	2.79	20	
Fluoranthene	16	0.75	20.00	0	78.0	40	132	1.94	20	
Pyrene	15	0.50	20.00	0	73.7	43.9	123	0	20	
Benz(a)anthracene	16	0.50	20.00	0	80.6	35	163	5.78	20	
Chrysene	16	0.50	20.00	0	79.0	45.9	119	0.762	20	
Benzo(b)fluoranthene	14	0.50	20.00	0	70.4	36.5	137	3.21	20	
Benzo(k)fluoranthene	16	0.50	20.00	0	79.1	37.1	143	4.69	20	
Benzo(a)pyrene	14	0.50	20.00	0	67.5	26.7	144	2.78	20	
Dibenz(a,h)anthracene	16	0.75	20.00	0	80.4	31	146	0.248	20	
Benzo(g,h,i)perylene	16	0.75	20.00	0	81.7	30.9	150	3.23	20	
Indeno(1,2,3-cd)pyrene	16	1.0	20.00	0	81.0	35.2	169	3.40	20	
Surr: Benzo(e)pyrene	12		20.00		61.6	38	145	0	0	
Surr: N-hexadecane	68		87.60		77.2	40	107	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
P	Sample pH greater than 2	R	RPD 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: 1302100

Received by/date: LM 02/04/13

Logged By: **Michelle Garcia** 2/4/2013 4:50:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 2/5/2013 8:16:24 AM Michelle Garcia

Reviewed By: 02/05/13

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. 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)

17. 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: _____

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Not Present			

Chain-of-Custody Record

Client: Terracon

Mailing Address: 4905 Hawkins Alb, NM 87109

Phone #:

email or Fax#: jasmith2@Terracon

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: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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)	Field Filtered Lead				Air Bubbles (Y or N)
~~2/4/13~~	~~1350~~	~~GW~~	~~MW1-020413~~																			
2/4/13	1350	GW	MW1-020413	VARIOUS	VARIOUS	1302100-001	X		X		X	X*				X		X**				

Date: 2/4/13 Time: 1650 Relinquished by: [signature]

Received by: [signature] Date: 02/04/13 Time: 1650

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: *HIGHEST DRO RUN PAH 8270 / YES, Analyze PAH + Pb per mark KMS 2/4

*HIGHEST GRO RUN Lead EDB/EDC

Julie Called and added EDB/EDC by 8260. mg02/05

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 G

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: January 31, 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.

SAFETY AND HEALTH Plan
for
PETROLEUM HYDROCARBON CONTAMINATION

TERRACON

Date: January 31, 2013

Rev: 12/05

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: Former Fairview Station

TERRACON JOB #: 66127029

Name (Please Print)	Signature	Date
Mark Hillier		1/31/13
Julie Smith		1/31/13
Rodney Brandt		1-31-13
Rodney Hammer		1-31-13
Susan von Gonten	Susan von Gonten	1-31-13

PERSONAL PROTECTIVE EQUIPMENT UTILIZED:

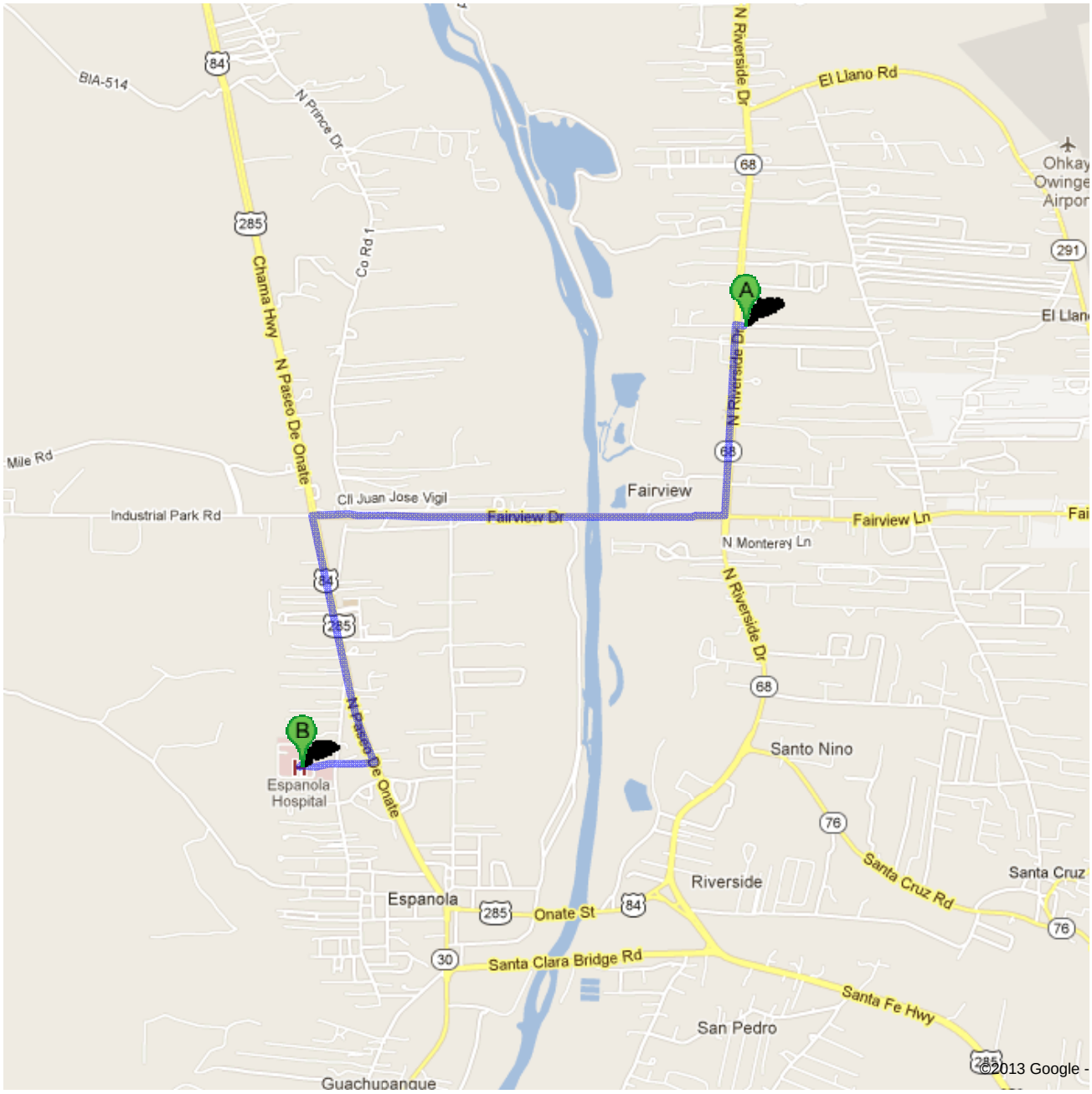
__X__ **LEVEL D** _____ **LEVEL D MOD.** ____ **LEVEL C**

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

PETROLEUM CONTAMINANT(S): _____ _____ _____

AIR MONITORING RESULTS (Attach separate page if required.)

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



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

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.