March 28, 2011

Jerry Wickham
Alameda County Environmental Health Svcs
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Transmittal Letter
Site Location: Springtown Gas
909 Blue Bell Drive, Livermore, CA 94551

Dear Mr. Wickham:

On behalf of Aminifilibadi Masood & Amini Sharbano, Geological Technics Inc. (GTI) prepared the 1st Quarter Groundwater Monitoring & Interim Remedial Action Status Report, dated March 28, 2011 that was sent to your office via electronic delivery per Alameda County's guidelines on March 29, 2011.

I declare under penalty of law that the information and/or recommendations contained in the above referenced document or report is true and correct to the best of my knowledge.

Respectfully submitted,

Aminifilibadi Masood/Amini Sharbano
Property Owner
909 Blue Bell Drive
Livermore, CA 94551

Geological Technics Inc.

REPORT

Groundwater Monitoring and Interim Remedial Action Status

1st Quarter 2011

Springtown Gas
909 Bluebell Drive
Livermore, California

Project No. 1409.2
March 28, 2011

Prepared for:
Masood Amini Filibadi and Shahrbano Amini
909 Bluebell Drive
Livermore, California 95353

Prepared by:
Geological Technics Inc.
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March 28, 2011

Project No.: 1409.2
Project Name: Springtown Gas (Bluebell)

Masood Amini Filibadi and Shahrbano Amini
Springtown Gas
909 Bluebell Drive
Livermore, California 94551

RE: Report – 1st Quarter 2011 Groundwater Monitoring
Springtown Gas, 909 Bluebell Drive, Livermore, California

Dear Masood Amini Filibadi and Shahrbano Amini:

Geological Technics Inc. (GTI) has prepared the following Report for the 1st Quarter 2011 groundwater monitoring event performed on February 17, 2011 at Springtown Gas, 909 Bluebell Drive, Livermore, California.

If you have any questions, please do not hesitate to call me at (209) 522-4119.

Respectfully submitted,

Tamorah Bryant, P.E.

cc: Jerry Wickham – ACEHS
USTCFP

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Geological Technics Inc.
1172 Kansas Avenue
Modesto, California 95351
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REPORT

Groundwater Monitoring and Interim Remedial Action Status
1st Quarter 2011

Springtown Gas
909 Bluebell Drive
Livermore, California

Project No. 1409.2
March 28, 2011

1. EXECUTIVE SUMMARY

This report summarizes the results of the 1st Quarter 2011 groundwater monitoring and sampling event that took place on February 17th, 2011 at Springtown Gas, 909 Bluebell Drive, Livermore, Alameda County, California (Site) and includes an evaluation of the interim remedial effectiveness as directed by Alameda County Environmental Health (ACEH) in correspondence dated November 15, 2010.

The average groundwater elevation at the site was 511.79 feet above mean sea level (AMSL) and the groundwater flow was N54°W at a gradient of 0.008 ft/ft for this event. This was the eighth monitoring event in which well P-1 was incorporated into the contours, and the fourth event that wells MW-4, MW-101, MW-102, and MW-103 were incorporated into the contours.

The results of analyses conducted on groundwater samples collected from the eight monitoring wells (STMW-1, STMW-2, STMW-3, P-1, MW-4, MW-101, MW-102 and MW-103) reported that six of the eight wells were below laboratory reporting limits for all constituents analyzed. MW-4, MW-101, MW-102 and MW-103 reported below laboratory reporting limits for the fourth consecutive quarter. Monitoring wells STMW-1 and P-1 reported to contain 4.2 µg/L and 1.9 µg/L of MTBE, respectively, which is below Environmental Screening Levels (ESLs) and California Drinking Water Maximum Contaminant Levels (MCLs) for all constituents analyzed.

The following recommendations are made:

1. Since the site meets low risk closure criteria, Geological Technics Inc. recommends that the site be considered for low-risk closure immediately.

2. Pending ACEH approval, GTI proposes preparing a work plan for well abandonment activities, in preparation for site closure.

3. Continue groundwater monitoring until directed otherwise by ACEH.

4. Impending changes within the USTCF process will result in budgetary constraints placed on all projects. To accommodate these impending changes, GTI proposes that the groundwater monitoring and sample analysis be reduced.

2. PHYSICAL SETTING

The Site is situated in a mixed commercial-residential land-use area of Livermore, California, located at the southeast corner of the intersection of Springtown Boulevard and Blue Bell Drive, approximately 300 feet north of westbound Interstate 580 (Figure 1). The Site occupies approximately 0.74 acres, and is currently an operating service station with mini-mart retailing Chevron-branded gasoline and diesel fuel products. The site contains one UST cluster in the east portion of the Site consisting of one 12,000 gallon capacity unleaded gasoline UST, and a 12,000 gallon capacity segmented UST storing 6,000 gallons of diesel and 6,000 gallons of premium unleaded. A single story mini-mart is located on the southern portion of the Site, and six canopied fuel dispensers are located in the north portion of the Site. No automotive repair facilities exist on the Site. The Site is adjoined by Springtown Boulevard on the west, motel properties on the south and east, and Bluebell Drive on the north. Retail land-use is located on the north side of Bluebell Drive, with residential land-use beyond to the north and northeast.

The Site is located at an elevation of approximately 520 feet above mean sea level in the northeast portion of the Livermore Valley (USGS 1981). The Livermore Valley is a structural basin bounded by faults on the east and west that create the Altamont Hills uplift on the east and the Pleasanton Ridge uplift on the west (CDM&G, 1991). The shallow Pleistocene to recent sediments underlying the basin consist of alluvial deposits that have been informally divided into upper and lower units. The sediment, ranging from coarse-grained gravel to fine-grained mud, was transported northward from the Northern Diablo Range on the southern margin of the basin and deposited in an alluvial fan, braided stream, and lacustrine environments. Because the sediment prograded northward, the coarse-grained sediment makes up nearly 80% of the sediment in the southern part of the basin, but northward and westward interfingers with clay deposits that may be as much as 30 feet thick (DWR, 2004).

Drainages from the south, north, and east converge in the western part of the basin and flow out of the basin toward the Sunol Valley and Alameda Creek west of Pleasanton Ridge. The nearest surface drainages are Las Positas Creek located approximately 1 mile west of the Site, and Cavetano Creek 2 miles west of the Site (USGS 1981).

The alluvial fan, braided stream and lacustrine deposits are the principal aquifers for most domestic and irrigation purposes in the Livermore Valley, although the underlying Livermore Formation, which may be as much as 4,000 feet thick, yields significant quantities of groundwater on the eastern side of the basin (DWR 2004).

3. GROUNDWATER MONITORING

3.1. Groundwater Elevation and Flow Direction

The average groundwater elevation for the 1st Quarter 2011 monitoring event was 511.79 feet AMSL on February 17th, 2011, which corresponds to approximately 7.84 feet below ground surface (bgs). This elevation represents an increase of 0.13 feet since the 4th Quarter 2010 monitoring event (November 30, 2010) and a decrease of 0.72 feet since the 1st Quarter 2010 monitoring event (February 10, 2010). The groundwater gradient for the 1st Quarter 2011 groundwater monitoring event was N54°W at a gradient of 0.008 ft/ft, which is consistent with the previous groundwater monitoring events.

The gradient direction for the 1st Quarter 2011 groundwater monitoring event is shown on Figure 2 (Groundwater Gradient Map 1st Quarter). The calculated groundwater gradient and flow direction is shown on Figure 3 (Groundwater Gradient Rose Diagram). The groundwater elevation data are summarized in Table 1 included in Appendix A. Table 4 provides a summary of monitoring well completion data.

3.2. Groundwater Sampling Procedure

The 1st Quarter 2011 groundwater monitoring event was conducted on February 17th, 2011. GTI monitored groundwater elevations and collected groundwater samples for analyses from eight groundwater monitoring wells on the Site. Depth to water in each monitoring well was measured and recorded before groundwater samples were collected from the wells. The wells were purged of at least three well volumes of stagnant water using dedicated Waterra® foot valves and tubing. Purging continued until the temperature, conductivity, and pH of the groundwater stabilized (<10% variation in three consecutive readings), indicating that formation water representative of aquifer conditions was entering the wells. These water quality parameters were measured at intervals of each well volume purged. All purge water was placed in a 55-gallon DOT drums and secured on-site.

Before a sample was collected from each well, the water level was allowed to recharge to at least 80% of its initial level. Dedicated tubing attached to Waterra® foot valves were used to collect groundwater samples from the monitoring wells. The samples were placed into 40-ml

VOA vials preserved with hydrochloric acid. Care was taken to minimize sample aeration during sample collection and avoid generating headspace. All samples were checked for the presence of headspace, labeled, recorded on a chain-of-custody, and placed in an ice chest cooled to 4°C for transport to the analytical laboratory. All non-disposable sampling equipment was decontaminated in an Alconox solution and double-rinsed with de-ionized water before initial use and between uses at each monitoring well.

Groundwater monitoring field logs are included in Appendix C. A summary of Water Quality Parameter Data is included in Table 3 of Appendix A.

3.3. Laboratory Analyses

The groundwater samples collected on February 17th, 2011, were delivered to Argon Laboratories of Ceres, California (ELAP #2359) for the following analyses:

The laboratory utilized USEPA Method 8260B to analyze the groundwater samples for the following constituents:

- Total petroleum hydrocarbons as gasoline (TPH-G),
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX),
- Methyl tertiary butyl ether (MtBE), and,
- Di-isopropyl alcohol (DIPE), ethyl-tertiary butyl ether (EtBE), tert-amyl-methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), tert butyl alcohol (TBA), methanol and ethanol

The results and detection limits for the above analyses are listed in Table 2 included in Appendix A. Certified analytical reports are included in Appendix B.

As required under AB2886, the groundwater elevation and laboratory analytical data were submitted electronically to GeoTracker on March 28, 2011 for the groundwater elevation data, (confirmation number 5432591259), and the laboratory analytical data (confirmation number 4803475916).

4. GROUNDWATER MONITORING FINDINGS

The results of the 1st Quarter 2011 groundwater monitoring event indicate the following:

- The average groundwater elevation at the site was 511.79 feet AMSL and the groundwater flow was N54°W at a gradient of 0.008 for this event.
- The results of analyses conducted on groundwater samples collected from all eight monitoring wells (STMW-1, STMW-2, STMW-3, P-1, MW-4, MW-101, MW-102, and MW-103) did not detect total petroleum hydrocarbons as gasoline (TPH-G) above laboratory reporting limits.

- Concentrations of Methyl tertiary Butyl Ether (MtBE) were detected in groundwater samples collected from two of the sites eight monitoring wells: STMW-1 (4.2 µg/l), and P-1 (1.9 µg/l). This suggests the MtBE groundwater plume is localized in the vicinity of monitoring well P-1.
- The results of analyses conducted on groundwater samples collected from all eight monitoring wells (STMW-1, STMW-2, STMW-3, P-1, MW-4, MW-101, MW-102, and MW-103) did not detect Tert-Butyl Alcohol (TBA) above laboratory reporting limits.
- Concentrations of di-isopropyl alcohol (DIPE), ethyl-tertiary butyl ether (EtBE), tert-amyl-methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), methanol, ethanol, benzene, toluene, ethylbenzene and total xylenes (BTEX) were not detected in groundwater samples collected from the sites eight monitoring wells.
- Concentrations of all constituents were reported in the groundwater samples collected from the sites eight monitoring wells are at historic or near lows for the 1st quarter of 2011.
- Dissolved Oxygen (DO) concentrations increased in all wells that were incorporated into the hydrogen peroxide pilot test (see following discussion and graphs).

5. REMEDIAL EFFECTIVENESS

5.1. Hydrogen Peroxide Pilot Study

In correspondence dated March 13, 2009, Alameda County Environmental Health Department (ACEH) directed GTI to conduct interim hydrogen peroxide injections on a weekly basis for no longer than 4 weeks. On April 14, 2010, GTI request included the newly installed monitoring wells into the injection group. Per two email requests dated April 21st, 2010 and May 17th, 2010, ACEH extended the interim hydrogen peroxide injection events to a total of 16 events. The interim hydrogen peroxide injection pilot test consisted of a total of 16 injection events conducted from March 30, 2010 through July 21, 2010. A total of approximately 2,385 gallons of dilute hydrogen peroxide solution was injected during the interim hydrogen peroxide injection series.

A historical summary of the hydrogen peroxide injections pilot test activities can be referred to in both the *Additional Site Characterization and Interim Remedial Action Report* prepared by GTI, dated July 30, 2010 and in the 2nd and 3rd Quarter 2010 *Groundwater Monitoring and Interim Remedial Effectiveness* report dated October 18, 2010.

The additional hydrogen peroxide injection pilot study, approved by ACHCSA on November 15, 2010, consisted of a total of 12 injection events conducted from December 14, 2010 through March 10, 2011. A total of approximately 2,393 gallons of hydrogen peroxide solution was injected during the interim hydrogen peroxide injection series. Table 5 of Appendix A contains a summary of the volumes, concentrations, wells, and dates of application for each of the injection events for both the pilot study and additional pilot study.

5.2. Impact on D.O. Concentrations

First Pilot Study

The following table includes a summary of the D.O. concentrations that were monitored in the field before during and after the injection events. Please note that STMW-2 did not receive any hydrogen peroxide, but has been included for comparison purposes.

Location	Pre Remedial DO Level (2/10/2010)	Mid Remedial DO Level (4/7/10)	Post Remedial DO level (8/24/10)
STMW-1	6.77	46.5	43.37
STMW-2	0.87	3.65	0.53
STMW-3	0.89	44.26	45.92
P1	0.85	41.56	25.20

It appears that each of the injection wells has experienced a significant increase in D.O. concentrations which appears to have sustained the increase at least a month after the pilot test injections had stopped.

MW-101, and MW-103 did not exhibit the sustained increase in D.O., and it is hypothesized that the wells are screened in a coarse grained unit, which has increased potential for transport, and the benefit of the hydrogen peroxide injection may have moved down gradient towards the small amount of contamination identified in the vicinity of GP-15.

Additional Pilot Study

The following table includes a summary of the D.O. concentrations that were monitored in the field before the first pilot study as well as before and during the additional pilot study injection events. Please note that STMW-2 received hydrogen peroxide during the additional pilot study. The D.O. concentrations for STMW-2 from the previous table can be used for comparison purposes. Although up-gradient monitoring well MW-4 did not receive peroxide injections during either pilot studies, DO concentrations were included for comparison as a representative background.

Location	Pre Additional Pilot Study DO Level (11/30/10)	Mid Additional Pilot Study DO Level (02/17/11)
STMW-1	-	44.57
STMW-2	-	36.31
STMW-3	-	39.47
P-1	-	42.07
MW-101	3.85	38.97
MW-102	4.55	21.70
MW-103	2.83	54.71
MW-4	0.15	0.13

Despite being screened in a coarse grained unit, which has increased potential for transport, MW-101, MW-102 and MW-103 exhibited a sustained increase in D.O. following two weeks without peroxide injections. The additional hydrogen peroxide pilot study appears to have been successful at sustaining the elevated DO concentrations achieved during the first pilot study and increasing DO concentrations in STMW-2 and MW-102.

5.3. Impact on Contamination Concentrations

First Pilot Study

The 3rd Quarter 2010 groundwater monitoring event analytical data had indicated historic or near historic lows of contaminant concentrations for the site. It is important to note that the third quarter groundwater monitoring event was conducted more than 30 days following the last injection event, to allow for potential rebound of concentrations. The following table is a summary of the MtBE and TBA concentrations reported to be present before and after the pilot test injection events:

Location	MtBE (µg/l)		TBA (µg/l)	
	Pre Pilot Test (2/10/10)	Post Pilot Test (8/24/10)	Pre Pilot Test (2/10/10)	Post Pilot Test (8/24/10)
STMW-1	32	5.9	28	87
STMW-2	<0.5	<0.5	110	33
STMW-3	44	<0.5	610	<5.0
P-1	110	5.4	5,200	120

Based on the above analytical data it appears that the pilot test was effective at reducing MtBE and TBA concentrations.

Additional Pilot Study

The 1st Quarter 2011 groundwater monitoring event analytical data has indicated historic low contaminant concentrations for the site. It is important to note that the 4th Quarter 2010 groundwater monitoring event was conducted more than 90 days following the last injection event of the first pilot study, to allow for potential rebound of concentrations. The 1st Quarter 2011 groundwater monitoring event was conducted after a 2 week break in the additional injection pilot study to allow for potential rebound of concentrations. The following table is a summary of the MtBE and TBA concentrations reported to be present before the first pilot test and near the end of the additional pilot test:

Location	MtBE (µg/l)		TBA (µg/l)	
	Pre Pilot Test (2/10/10)	Mid Additional Pilot Test (2/17/11)	Pre Pilot Test (2/10/10)	Mid Additional Pilot Test (2/17/11)
STMW-1	32	4.2	28	<0.5
STMW-2	<0.5	<0.5	110	<0.5
STMW-3	44	<0.5	610	<0.5
P-1	110	1.9	5,200	<0.5

5.4. Environmental Screening Levels

Maximum concentrations reported in the 1st Quarter 2011 groundwater monitoring event were compared to Table F-1a. Groundwater Screening Levels (groundwater is a current or potential drinking water resource) of *Screening for Environmental Concerns with Contaminated Soil and Groundwater Interim Final – November 2007 (Revised May 2008)* prepared by the California Regional Water Quality Control Board San Francisco Bay Region.

COC	1st Qtr 2011 Max Conc. (µg/l)	Table F-1a ESL (µg/l)
TPH-Gasoline	ND<50	100
MtBE	4.2	5
TBA	ND<0.5	12

MtBE was reported to be below ESLs (based on taste and odor) all wells and was reported to be below the California Drinking Water Maximum Contaminant Level of 13 µg/l in all wells. TBA was reported to be below ESLs (based on drinking water toxicity) in all wells.

5.5. Opinion of Effectiveness

It is GTI's opinion that the interim remedial activities consisting of a hydrogen peroxide injection pilot test and additional pilot test were successful and that ISCO is an effective technology to address the contamination in the subsurface.

It is hypothesized that a small amount of residual contamination located in the northwest area of the former USTs (in the vicinity of SB-8) may be sourcing the groundwater plume that is being reported in samples collected from P1 and STMW-1.

6. LOW RISK CLOSURE CONSIDERATION

1. The leak has been stopped and ongoing sources, including free product, removed or remediated.

One underground waste oil tank was located on this site and was removed on February 7, 1992 by Alpha Geo Services Inc. Three 10,000 gallon underground storage tanks (UST's) were removed on December, 13, 1993, followed by the installation of three new gasoline USTs in a separate pit on the east side of the Site, which are still present. Impacted soil was removed from the waste oil and gasoline UST removal excavations and was transported and disposed offsite. GTI concludes that the leak has been stopped and ongoing sources have been removed.

2. The site has been adequately characterized.

A summary of previous investigations including various soil borings, groundwater monitoring well data, CPT and GeoProbe borings have been incorporated into a Site Conceptual Model and Additional Site Characterization Reports. The vertical and lateral extents of the soil and groundwater contamination in the subsurface have been identified, and updated as new information has become available.

As discussed in the *Additional Site Characterization & Interim Remedial Action Report* prepared by GTI, dated July 30, 2010, groundwater and soil contaminants at the site are primarily MtBE and TBA. A minimal amount of TPH-g and methanol has been reported to be present in groundwater and soil but are deemed insignificant. The MtBE and TBA groundwater plume appears to be centered on well P1, and appears to attenuate laterally with distance. The soil plume is laterally and vertically defined with very little contamination reported to be present. It was suspected that a small pocket of contaminated soil located in the northwest area of the former USTs may have been sourcing the groundwater plume. A pocket of contaminated soil was identified from the GeoProbe investigation in the median of Bluebell Drive. The analytical data from soil sampling indicated that the extent of the contamination appeared to be limited vertically and laterally.

3. The dissolved hydrocarbon plume is not migrating.

The site monitoring wells (with the exception of P-1 and STMW-1) have been reported to contain non-detect levels of contaminants of concern. Both P-1 and STMW-1 reported concentrations of MTBE which have been steadily declining and in the first quarter of 2010 are reported to be below CRWCB SFBA Environmental Screening Levels (ESL's).

Based on historical groundwater monitoring data, the historical groundwater gradient is estimated to be 0.005 ft/ft N60°W. The down gradient wells would be considered to include STMW-3 and MW-103, and may include STMW-1 and MW-101. Recent groundwater monitoring from the 1st quarter of 2011 has indicated that concentrations reported in STMW-

3, MW-101 and MW-103 are non-detect, and STMW-1 are non-detect or below California drinking water MCLs for all analyzed constituents. It appears that the groundwater plume is limited in extent, as contaminants of concern are not present in the down gradient wells.

Previous site investigations performed by Enviro Soil Tech Consultants in 2007 and 2008 indicated that groundwater contamination had migrated north along a coarse-grained sand bed. It is GTI's opinion that the interim remedial action of hydrogen peroxide injection that included MW-101 and MW-102 will address any residual offsite contamination.

4. No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

In March 2007, a 2000-foot receptor well survey was conducted. A total of 51 wells were located within 2,000 feet of the Site, of which 49 are monitoring wells for other contaminated sites. One domestic well and one supply well were located within 2,000 feet of the Site. The domestic well was reported to be located approximately 1950 feet southeast of the Site and the supply well was reported to be located approximately 1,400 feet southeast of the Site. Both of the reported wells appear to be located up gradient of the site, and therefore would not be expected to be impacted.

5. The site presents no significant risk to human health.

The potential risk to human health for this site can be estimated by examining the various exposure pathways and beneficial uses of the soil and groundwater at the site. The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Basin Plan designates the beneficial uses of groundwater in the Livermore Valley as domestic, municipal, and industrial/agricultural supply.

- As discussed previously, the February 17, 2011 groundwater monitoring event results indicate that all monitoring wells were reported to contain levels of contaminants of concern that were below analytical reporting limits, or below drinking water MCLs (13 µg/l) and ESLs based on taste & odors (5.0 µg/l). Therefore, potential use of groundwater as a source of drinking water would not pose a significant threat to human health.
- The recent groundwater monitoring analytical data results show that the concentrations of MtBE reported to be present in STMW-1 and P1 (4.2 and 1.9 µg/l respectively) are well below the ESL for vapor intrusion into buildings (24,000 µg/l). Therefore, potential for vapor intrusion into buildings would not pose a significant threat to human health.
- The surface of the site is encapsulated with concrete, asphalt and structures, so the risk of dermal contact with soil or groundwater is low.

Based on the low concentrations of contaminants reported to be present in recent groundwater sampling, stability of the plume and adequate characterization of the on-site contamination GTI concludes that the site does not present a significant risk to human health.

6. The site presents no significant risk to the environment.

The potential risk to the environment for this site can be estimated by examining the various beneficial uses of the soil and groundwater at the site:

- The nearest surface water is located approximately one mile west of the site, but is not likely to be impacted due to distance from the release, and recent MtBE concentrations being significantly below the ESL for aquatic habitat goal of 8,000 µg/l. Therefore, potential for impact to aquatic habitat would not pose a significant threat to the environment.

Due to the low concentrations of contaminants reported to be present in recent groundwater sampling, stability of the plume and adequate characterization of the on-site contamination GTI concludes that the site does not present a significant risk to the environment.

7. CONCLUSIONS

The results of the 1st Quarter 2011 groundwater monitoring event indicate the following:

- The average groundwater elevation at the site was 511.79 feet AMSL and the groundwater flow was N54°W at a gradient of 0.008 ft/ft.
- Six of the eight monitoring wells were found to be non-detect above reporting limits for all analyzed constituents.
- Monitoring wells STMW-1 and P-1 reported to contain 4.2 ug/L and 1.9 ug/L of MTBE, respectively, which are below Environmental Screening Levels (ESLs) and California drinking water MCLs.
- Dissolved Oxygen (DO) concentrations in all eight wells sampled at the site are at historical high levels following the additional hydrogen peroxide pilot study, and Oxidation Reduction Potential (ORP) is consistent with recent data.
- The site appears to meet the criteria for low-risk closure, with no significant threat posed to human health or the environment.

8. RECOMMENDATIONS

1. Since the site meets low risk closure criteria, Geological Technics Inc. recommends that the site be considered for low-risk closure immediately.

2. Pending ACEH approval, GTI proposes preparing a work plan for well abandonment activities, in preparation for site closure.

3. Continue groundwater monitoring until directed otherwise by ACEH.

4. Impending changes within the USTCF process will result in budgetary constraints placed on all projects. To accommodate these impending changes, GTI proposes that the

groundwater monitoring and sample analysis be revised as outlined below. Please note that the reductions in frequency and constituents are based on consideration of historical data.

The current monitoring plan includes semiannual monitoring of eight groundwater monitoring wells (STMW-1, STMW-2, STMW-3, P1, MW-4, MW-101, MW-102 and MW-103).

The proposed monitoring plan would be effective for the 2011 3rd quarter semi-annual event and includes:

- Semiannual monitoring of four groundwater monitoring wells which have historically been reported to contain contaminants of concern (STMW-1, STMW-2, STMW-3, P1).
- Annual monitoring of four groundwater monitoring wells which have historically contained levels of contaminants of concern below laboratory analytical report limits (MW-4, MW-101, MW-102 and MW-103).
- Laboratory analysis is proposed to be reduced to TPH-g, MTBE and TBA for all wells.

Please note that GTI recommends reverting to the current monitoring schedule as the USTCF process permits, until such time as wells can be abandoned in preparation for site closure.

9. REFERENCES

California Environmental Protection Agency "*Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*", January 2005

California Regional Water Quality Control Board, San Francisco Bay Region "*Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final*", November, 2007 (Revised May 2008).

Enviro Soil Tech Consultants *"Off-site Drilling and Vapor Extraction Pilot Test at the Property Located at 909 Bluebell Drive, Livermore, California*", July 1, 2008.

Geological Technics Inc. *"Additional Site Characterization & Interim Remedial Action Report, Springtown Gas, 909 Bluebell Drive, Livermore, California"*, dated July 30, 2010.

Geological Technics Inc. *"Site Conceptual Model Report December 2008 – Springtown Gas, 909 Bluebell Drive, Livermore, California*", December 8, 2008.

10. LIMITATIONS

This report was prepared in accordance with the generally accepted standard of care and practice in effect at the time Services were rendered. It should be recognized that definition and evaluation of environmental conditions is an inexact science and that the state or practice of environmental geology/hydrology is changing and evolving and that standards existing at the present time may change as knowledge increases and the state of the practice continues to improve. Further, that differing subsurface soil characteristics can be experienced within a small distance and therefore cannot be known in an absolute sense. All conclusions and recommendations are based on the available data and information.

The tasks proposed and completed during this project were reviewed and approved by the local regulatory agency for compliance with the law. No warranty, expressed or implied, is made.

11. CERTIFICATION

This report was prepared by:

Andrew Dorn, B.Sc. Geology

This report was prepared under the direction of:

Tamorah Bryant, P.E.

Figure 1: Vicinity Map
Springtown Gas (Blue Bell)
909 Blue Bell Drive
Livermore, California
Project No. 1409.2

TN
MN (14.1°E)

Scale 1 : 22,400
1" = 1,866.7 ft
Data Zoom 13-2

N

0 10 20 30
SCALE 1"=30'

GROUNDWATER GRADIENT
N54°W @ 0.008 ft/ft

BLUEBELL DRIVE

SPRINGTOWN BLVD

511.71

MW-101

STMW-1
511.59

VE-2

511.73
MW-103

OP1
511.63

CPT-1

WATER/AIR
STATION

STMW-3
511.50

CPT-2

R-2

EXISTING
USTs

511.60

511.65

EX.PUMP
AREA

VE-1

511.70

511.75

511.80

R-1

MW-102
511.83

STMW-2
511.85

511.85

511.90

511.95

512.00

512.05

512.10

512.15

512.20

512.25

512.30

MW-4
512.51

EX.BLDG

TRASH
ENCL

LEGEND

- SOIL BORING
- MONITORING WELL
- UST MONITORING WELL
- EXTRACTION WELL
- CPT BORING
- PROPOSED PILOT TEST INJECTION WELL

Gradient determined using 3-point problem w/ MW-4, STMW-3 & STMW-1 along w/ computer generated contours

By:	AD
Job No:	1409.2 Date: 2/17/11
Scale:	1"=30'
File:	14092 GWG Contour

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Modesto, CA
95351
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209.522.4227 (fax)

FIGURE 2: Groundwater Gradient Map
(1st Quarter 2011)
SPRINGTOWN GAS (BLUEBELL)
909 BLUEBELL DRIVE
LIVERMORE, CA

	Date	Slope	Bearing
1.	09/04/07	0.006 ft/ft	N66°W
2.	12/10/07	0.004 ft/ft	N62°W
3.	09/25/08	0.003 ft/ft	N54°W
4.	12/29/08	0.004 ft/ft	N64°W
5.	03/10/09	variable	variable
6.	06/10/09	variable	variable
7.	09/08/09	variable	variable
8.	02/10/10	variable	variable
9.	06/25/10	0.006 ft/ft	N41°W
10.	06/25/09	variable	variable
11.	08/24/10	variable	variable
12.	11/30/10	variable	variable
13.	02/17/11	0.008 ft/ft	N54°W

N

0 10 20 30

SCALE 1"=30'

0 0.005

SLOPE (ft/ft)

13

9

BLUEBELL DRIVE

1

2

4

3

MW-101

STMW-1

VE-2

MW-103

STMW-3

CPT-2

P1

CPT-1

WATER/AIR STATION

R-2

EXISTING USTs

VE-1

EX.PUMP AREA

R-1

MW-102

STMW-2

SPRINGTOWN BLVD

MW-4

EX.BLDG

TRASH ENCL

LEGEND

- SOIL BORING
- MONITORING WELL
- UST MONITORING WELL
- EXTRACTION WELL
- CPT BORING
- PROPOSED PILOT TEST INJECTION WELL

By: AD	
Job No: 1409.2 Date: 2/17/11	
Scale: 1"=30'	
File: 14092 Rose Diagram	

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FIGURE 3: Groundwater Gradient Rose Diagram

SPRINGTOWN GAS (BLUEBELL)
909 BLUEBELL DRIVE
LIVERMORE, CA

Appendix A

Summary Tables

Table 1
Summary of Groundwater Elevation

Springtown Gas
909 Bluebell Drive
Livermore, California

Date		STMW-1	STMW1	STMW-2	STMW2	STMW-3	STMW3	P-1	P-1	MW-4	MW-4	MW-101	MW-101	MW-102	MW-102	MW-103	MW-103	Avg GW	AVG GW	GW Gradient	
		GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	Elev	DTW	Slope	Direction
	*top of casing**	517.55		519.59		520.37		518.93		521.98		518.42		520.13		520.07				ft/ft	
9/4/2007		510.97	6.58	511.59	8.00	510.85	9.52	-	-	-	-	-	-	-	-	-	-	511.14	-	0.006	N66°W
12/10/2007		511.29	6.26	511.59	8.00	511.25	9.12	-	-	-	-	-	-	-	-	-	-	511.38	-	0.004	N62°W
9/25/2008		510.69	6.86	510.9	8.69	510.65	9.72	-	-	-	-	-	-	-	-	-	-	510.75	-	0.003	N54°W
11/20/2008		510.81	6.74	511.17	8.42	510.82	9.55	-	-	-	-	-	-	-	-	-	-	510.93	-	0.004	N60°W
12/29/2008		511.60	5.95	511.9	7.69	511.50	8.87	-	-	-	-	-	-	-	-	-	-	511.67	-	0.004	N64°W
3/10/2009		512.60	4.95	512.99	6.60	512.44	7.93	513.20	5.73	-	-	-	-	-	-	-	-	512.81	6.30	variable	variable
6/10/2009		510.90	6.65	511.21	8.38	510.84	9.53	511.50	7.43	-	-	-	-	-	-	-	-	511.11	8.00	variable	variable
9/8/2009		510.62	6.93	510.78	8.81	510.59	9.78	511.17	7.76	-	-	-	-	-	-	-	-	510.79	8.32	variable	variable
2/10/2010		512.39	5.16	512.68	6.91	512.00	8.37	512.95	5.98	-	-	-	-	-	-	-	-	512.51	6.61	variable	variable
6/25/2010		511.19	6.36	511.43	8.16	511.06	9.31	511.73	7.20	512.09	9.89	511.36	7.06	511.47	8.66	511.38	8.69	511.46	8.17	variable	variable
8/24/2010		511.15	6.40	511.38	8.21	511.01	9.36	510.72	8.21	511.98	10.00	511.21	7.21	511.31	8.82	511.23	8.84	511.25	8.38	variable	variable
11/30/2010		511.48	6.07	511.72	7.87	511.21	9.16	511.93	7.00	512.37	9.61	511.47	6.95	511.58	8.55	511.50	8.57	511.66	7.97	variable	variable
2/17/2011		511.59	5.96	511.85	7.74	511.50	8.87	511.63	7.30	512.51	9.47	511.71	6.71	511.83	8.30	511.73	8.34	511.79	7.84	0.008	N54°W
																	Historical	**511.48**	**7.70**	**0.005**	**N60°W**

*TOC elevations surveyed on 9/06/07 by Muir Consutling Inc. for wells STMW-1, 2, 3, & P-1 NAD 83 and NGVD 29
*TOC elevations surveyed on 7/08/10 by Benchmark Engineering for wells MW-101, 102, 103, & MW-4
**Gradient and slope determined from computer generated contours
***Gradient calculated using 3-point problem w/ MW-4, STMW-1 and STMW-3 as of 2/17/11
"-" Well P-1 not surveyed until 2/03/09

Table 2
Summary of Groundwater Analytical Data

Springtown Gas
909 Bluebell Drive
Livermore, California

MONITORING WELL	Date	TPHg	B	T	E	X	MtBE	TBA	DIPE	EtBE	TAME	1,2-DCA	EDB	Methanol	Ethanol
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
STMW-1	9/4/2007	**220**	<10	<10	<10	<10	**850**	**6,500**	-	-	-	-	-	-	-
	12/10/2007	**210**	<5	<5	<5	<5	**540**	**4,200**	-	-	-	-	-	-	-
	9/25/2008	**230**	<0.5	<0.5	<0.5	<1.0	**204**	**704**	<0.5	<0.5	**0.6**	<0.5	<0.5	<5	<20
	11/20/2008	<50	<0.5	<0.5	<0.5	<1.0	**14**	**930**	<0.5	<0.5	<0.5	-	-	-	-
	12/29/2008	<50	<0.5	<0.5	<0.5	<1.0	**15**	**1,000**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	3/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**29**	**3,000**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**60**	**3,800**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	9/8/2009	<50	<0.5	<0.5	<0.5	<1.0	**52**	**190**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/10/2010	<50	<0.5	<0.5	<0.5	<1.0	**32**	**28**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/25/2010	Not sampled													
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	**5.9**	**87**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	Not sampled													
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	**4.2**	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
STMW-2	9/4/2007	<50	<0.5	<0.5	<0.5	<0.5	<1	**42**	-	-	-	-	-	-	-
	12/10/2007	<50	<0.5	<0.5	<0.5	<0.5	<1	**83**	-	-	-	-	-	-	-
	9/25/2008	<50	<0.5	<0.5	<0.5	<1	<0.5	**71**	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<20
	11/20/2008	**90**	**1.7**	**6.9**	**1.7**	**7.6**	**2.2**	**190**	<0.5	<0.5	<0.5	-	-	-	-
	12/29/2008	<50	<0.5	<0.5	<0.5	<1.0	<0.5	**56**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	3/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**1.5**	**96**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**1.1**	**43**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	9/8/2009	<50	<0.5	<0.5	<0.5	<1.0	<0.5	**45**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/10/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	**110**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/25/2010	Not sampled													
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	**33**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	Not sampled													
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
STMW-3	9/4/2007	**59**	<1	<1	<1	<1	**160**	**120**	-	-	-	-	-	-	-
	12/10/2007	<50	<0.5	<0.5	<0.5	<0.5	**17**	**86**	-	-	-	-	-	-	-
	9/25/2008	<50	<0.5	<0.5	<0.5	<0.5	**67**	**31.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<20
	11/20/2008	<50	<0.5	<0.5	<0.5	<1.0	**12**	<5	<0.5	<0.5	<0.5	-	-	-	-
	12/29/2008	<50	<0.5	<0.5	<0.5	<1.0	**2.2**	<5.	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	3/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**3**	**95**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**8.3**	**45**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	9/8/2009	<50	<0.5	<0.5	<0.5	<1.0	**11**	**29**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/10/2010	<50	<0.5	<0.5	<0.5	<1.0	**44**	**610**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/25/2010	Not sampled													
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	ND<0.5	ND<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	Not sampled													
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
P1	11/20/2008	<50	<5	<5	<5	<10	**180**	**2,300**	<5	<5	<5	-	-	-	-
	12/29/2008	<50	<0.5	<0.5	<0.5	<1.0	**120**	**3,900**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	3/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**240**	**9,300**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	6/10/2009	<50	<0.5	<0.5	<0.5	<1.0	**250**	**6,300**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	9/8/2009	<250	<2.5	<2.5	<2.5	<5	**180**	**2,900**	<2.5	<2.5	<2.5	<2.5	<2.5	<250	<25
	2/10/2010	<250	<2.5	<2.5	<2.5	<5	**110**	**5,200**	<2.5	<2.5	<2.5	<2.5	<2.5	<250	<25
	6/25/2010	Not sampled													
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	**5.4**	**120**	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	Not sampled													
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	**1.9**	ND<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
MW-4	6/25/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
MW-101	6/25/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
MW-102	6/25/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
MW-103	6/25/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	8/24/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	11/30/2010	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5
	2/17/2011	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5

Notes:

TPHg	Total petroleum hydrocarbons as gasoline
TPHd	Total petroleum hydrocarbons
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MtBE	Methyl tertiary butyl ether
TBA	Tert-butyl alcohol
DIPE	Di-isopropyl ether
EtBE	Ethyl-tertiary butyl ether
TAME	Tert-amyl-methyl ether
1,2-DCA	1,2-Dichloroethane
EDB	1,2-Dibromoethane
bgs	below ground surface
ug/l	micrograms per liter
-	Not analyzed or not reported

Table 3
Summary of Water Quality Parameter Data

Springtown Gas
909 Bluebell Drive
Livermore, California

Monitoring Well	STMW-1						STMW-2						STMW-3					
Date	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO
9/4/2007	6.37	1462	21.40	70.5	NM	NM	6.43	1405	21.1	70.0	NM	NM	6.14	2115	20	68.0	NM	NM
12/10/2007	6.92	1090	18.50	65.3	NM	NM	7.02	1074	19.8	67.6	NM	NM	6.77	1267	NM	NM	NM	NM
9/25/2008	7.22	1706	21.63	70.9	48.3	0.38	7.15	1652	21.26	70.3	34	0.7	6.84	1838	20.32	68.6	60.2	0.84
10/2/2008	7.16	1701	21.57	70.8	45.6	0.68	7.07	1650	21.14	70.1	51.8	0.58	6.82	1892	20.47	68.8	156	1.81
10/9/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/16/2008	7.53	970	21.48	70.7	71.6	36.39	7.07	1611	21.35	70.4	56.7	0.21	7.38	656	20.64	69.2	66.6	37.4
10/23/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/30/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/6/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/20/2008	7.36	1554	20.74	69.3	208.3	11.17	7.20	1782	21.21	70.2	211.4	1.13	7.88	771	20.63	69.1	194.6	15.53
12/29/2008	7.78	1685	18.61	65.5	168.8	41.24	7.64	1577	20.21	68.4	66.9	2.04	7.55	1196	19.69	67.4	141.5	32.54
3/10/2009	7.23	1861	16.14	61.05	401.3	20.56	7.31	1600	17.94	64.3	372.9	0.67	7.10	1555	17.29	63.1	509.3	7.17
6/10/2009	7.24	1624	18.76	65.77	469.2	12.69	7.30	1548	18.58	65.4	348.7	0.38	7.08	1476	17.97	64.3	557.5	2.17
9/8/2009	7.07	NM	21.66	71.0	544.3	NM	7.22	NM	20.88	69.6	250.1	NM	6.83	NM	20.15	68.3	564.2	NM
2/10/2010	7.35	1660	17.09	62.8	531.3	6.77	7.30	1618	18.71	65.7	394.4	0.87	7.20	1642	17.99	64.4	469.0	0.89
6/25/2010	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
8/24/2010	6.44	707	20.79	69.4	195.7	43.37	6.32	1730	20.45	68.8	135.9	0.53	6.61	384	20.10	68.2	255.2	45.92
11/30/2010	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/17/2011	8.10	365	17.55	63.6	241.3	44.57	NM	NM	NM	NM	NM	NM	8.14	241	18.21	64.8	249	39.47

Monitoring Well	P-1						VE-1						VE-2					
Date	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO
9/4/2007	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12/10/2007	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
9/25/2008	7.2	1941	20.59	69.1	50.3	1.19	6.9	2072	22.8	73.0	-44.9	3.07	7.1	1933	21.67	71.0	-13.6	6.48
10/2/2008	7.1	1893	20.44	68.8	59.6	1.18	7.18	1780	22.02	71.6	2.1	8.29	NM	NM	NM	NM	NM	NM
10/9/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/16/2008	7.75	1285	20.61	69.1	85.9	18.23	6.84	1668	22.29	72.1	3.3	1.53	7.16	1912	21.38	70.5	-1.1	7.25
10/23/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.42	1924	19.91	67.8	49.6	8.48
10/30/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.81	1052	20.05	68.1	164.0	172.1
11/6/2008	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.13	1329	19.94	67.9	183.5	9.77
11/20/2008	7.99	1392	19.96	67.9	180	8.19	6.99	1960	18.91	66.0	38.6	4.82	6.89	1593	19.47	67.0	224.5	9.09
12/29/2008	7.99	1766	18.99	66.2	285.5	43.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
3/10/2009	7.30	1797	16.81	62.26	473.9	3.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/10/2009	7.34	1795	17.85	64.13	455.7	1.09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
9/8/2009	7.14	NM	19.98	68.0	312.2	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/10/2010	7.42	1658	17.22	63.0	139.0	0.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/25/2010	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
8/24/2010	7.99	632	20.95	69.7	206.4	25.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/30/2010	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/17/2011	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Monitoring Well	MW-4						MW-101						MW-102					
Date	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO	pH	E.C.	°C	°F	ORP	DO
6/25/2010	7.20	1228	18.20	64.76	165.5	0.05	7.20	1077	19.40	66.92	248.3	30.27	7.10	1042	19.60	67.28	190.3	6.35
8/24/2010	6.11	1343	19.27	66.69	125.7	0.94	6.58	1170	19.80	67.64	178.5	7.36	6.44	1141	19.81	67.66	129.3	5.22
11/30/2010	6.83	1258	18.73	65.71	214.6	0.15	6.73	1083	18.72	65.70	189.3	3.85	6.76	1060	18.91	66.04	151.0	4.55
2/17/2011	7.28	1459	18.14	64.65	229.4	0.13	7.32	1126	19.27	66.69	266.3	38.97	7.30	1094	19.18	66.52	261.8	21.70

Monitoring Well	MW-103					
Date	pH	E.C.	°C	°F	ORP	DO
6/25/2010	7.12	1316	19.10	66.38	277.3	29.46
8/24/2010	6.56	1464	19.32	66.78	192.1	23.64
11/30/2010	6.89	1307	18.82	65.88	140.6	2.83
2/17/2011	7.21	1389	18.74	65.73	282.1	54.71

Notes:

E.C.	⁄al conductivity
°C	es centigrade
°F	es fahrenheit
ORP	eduction potential
DO	lved oxygen
NM	measured

Table 4
Summary of Monitoring Well Completion Data

Springtown Gas
909 Bluebell Drive
Livermore, California

Well Number	Status	Date Drilled	Total Depth (ft)	Boring Diameter (in)	Well Casing Diameter (in)	Casing Type	Slot Size (in)	Sand Type	Well Screen		Filter Pack		Annular Seal		Grout Seal	
									From	To	From	To	From	To	From	To
STMW-1	Active	8/23/2007	20	10	2	PVC	0.02	#2/12	10	20	20	8	8	7	7	0
STMW-2	Active	8/23/2007	20	10	2	PVC	0.02	#2/12	10	20	20	8	8	7	7	0
STMW-3	Active	8/23/2007	20	10	2	PVC	0.02	#2/12	10	20	20	8	8	7	7	0
P1	Active	9/19/2008	20	10	4	PVC	0.02	#3/12	10	20	20	8	8	7	7	0
MW-4	Active	2/25/2010	20	8	2	PVC	0.02	#3/12	10	20	20	8	8	5	5	0
MW-101	Active	2/25/2010	37	8	2	PVC	0.02	#3/12	32	37	37	30	30	28	28	0
MW-102	Active	2/25/2010	40	8	2	PVC	0.02	#3/12	32	40	40	30	30	27	27	0
MW-103	Active	2/26/2010	35	8	2	PVC	0.02	#3/12	30	35	35	28	28	25	25	0

Table 5
Summary of Hydrogen Peroxide Injections

Springtown Gas
909 Bluebell Drive
Livermore, California

Pilot Test

DATE	STMW-1				STMW-3		P1		MW-101				MW-103	
	7%	10%	-	-	7%	10%	7%	10%	7%	10%	-	-	7%	10%
3/30/2010	65	-	-	-	60	-	25	-	-	-	-	-	-	-
4/7/2010	75	-	-	-	50	-	25	-	-	-	-	-	-	-
4/15/2010	10	-	-	-	30	-	10	-	50	-	-	-	50	-
4/22/2010	15	-	-	-	30	-	10	-	55	-	-	-	50	-
4/30/2010	-	15	-	-	-	30	-	8	-	50	-	-	-	47
5/5/2010	-	10	-	-	-	35	-	5	-	50	-	-	-	50
5/11/2010	-	10	-	-	-	35	-	5	-	50	-	-	-	50
5/18/2010	-	10	-	-	-	25	-	5	-	45	-	-	-	45
5/26/2010	-	10	-	-	-	25	-	5	-	55	-	-	-	55
6/2/2010	-	10	-	-	-	50	-	7	-	50	-	-	-	35
6/9/2010	10	-	-	-	50	-	8	-	35	-	-	-	40	-
6/16/2010	15	-	-	-	45	-	-	7	45	-	-	-	40	-
7/1/2010	15	-	-	-	40	-	-	7	45	-	-	-	45	-
7/8/2010	10	-	-	-	30	-	-	10	50	-	-	-	50	-
7/14/2010	10	-	-	-	30	-	-	10	50	-	-	-	50	-
7/21/2010	10	-	-	-	25	-	-	10	50	-	-	-	50	-
Totals	**235**	**65**	**0**	**0**	**390**	**200**	**78**	**79**	**380**	**300**	**0**	**0**	**375**	**282**

Additional Pilot Test

DATE	STMW-1		STMW-2		STMW-3		P1		MW-101		MW-102		MW-103	
	7%	10%	7%	10%	7%	10%	7%	10%	7%	10%	7%	10%	7%	10%
12/14/2010	-	10	10	-	30	-	-	10	50	-	35	-	50	-
12/15/2010	10	-	5	-	20	-	10	-	-	-	15	-		-
12/21/2010	-	15	15	-	45	-	-	20	50	-	50	-	50	-
12/28/2010	5	-	5	-	10	-	25	-	25	-	20	-	20	-
12/30/2010	5	-	5	-	10	-	10	-	25	-	25	-	30	-
1/4/2011	5	-	5	-	-	-	20	-	25	-	25	-	30	-
1/11/2011	5	-	5	-	30	-	20	-	25	-	25	-	-	-
1/18/2011	10	-	10	-	-	-	10	-	25	-	30	-	25	-
1/20/2011	10	-	5	-	27	-	8	-	30	-	30	-	-	-
1/25/2011	10	-	5	-	-	-	5	-	30	-	30	-	30	-
1/27/2011	10	-	5	-	25	-	10	-	30	-	30	-	-	-
2/1/2011	5	-	5	-	-	-	20	-	25	-	25	-	30	-
2/3/2011	8	-	8	-	26	-	16	-	24	-	28	-	-	-
2/18/2011	5	-	5	-	-	-	20	-	25	-	25	-	30	-
2/22/2011	5.5	-	5	-	30	-	22	-	25	-	27.5	-	-	-
2/24/2011	5	-	5.25	-	-	-	19.5	-	29.5	-	35	-	30	-
3/1/2011	5	-	5	-	30	-	20	-	25	-	25	-	-	-
3/3/2011	5	-	5	-	-	-	20	-	25	-	25	-	30	-
3/9/2011	5	-	5	-	30	-	8	-	32	-	33	-	-	-
3/10/2011	5	-	5	-	-	-	20	-	25	-	25	-	30	-
Totals	**119**	**25**	**123**	**0**	**313**	**0**	**284**	**30**	**551**	**0**	**564**	**0**	**385**	**0**

Appendix B

Laboratory Analytical Data Sheets

argon laboratories

01 March 2011

GTI
Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

RE: Springtown Gas Project Data

Enclosed are the results for sample(s) received on 02/18/11 12:24 by Argon Laboratories. The sample(s) were analyzed according to instructions in accompanying chain-of-custody. Results are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

The sample(s) will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Sample(s) may be archived by prior arrangement.

Thank you for the opportunity to service the needs of your company.

Sincerely,

Hiram Cueto
Lab Manager

2905 Railroad Avenue, Ceres, CA 95307 • Phone (209) 581-9280 • Fax (209) 581-9282
email: main@argonlabs.com

Geological Technics Inc.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gti@gtienv.com

Chain of Custody

Project #:	Client/Project Name:
1409.2	SPRINGTOWN GAS

Site Address: 909 BLUEBELL DRIVE, LIVERMORE, CA

Global ID No.: T0601971697

Sampled By: (print and sign name) ANDREW DORN

Date	Time	Field I.D.	Sample I.D.	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	* METHOD 8260B
02-17-11	1030		MW-4	4	W	HCL	X
	1105		MW-101				
	1150		MW-102				
	1310		MW-103				
	1420		STMW-2				
	1435		STMW-1				
	1450		STMW-3				
↓	1520		P-1	↓	↓	↓	↓

Analysis Requested

Laboratory: ARGON

Temp. @ Shipping: C°

Temp. @ Lab Receipt: C°

Purchase Order # 1409-213824

EDF Report: ☒ Yes ☐ No

Turnaround Time: (S = Standard)
1 day 2 day 5 day

Remarks

* METHOD 8260B INCLUDES:
TPH-G, BTEX, MTBE, ETBE, DIPE, TAME, TBA, 1,2-DCA, EDB, METHANOL & ETHANOL

REPORTING LIMITS AS FOLLOWS:

- TPH-G RL = 50 ug/L
- ALL OTHERS RL = 0.5 ug/L

Relinquished by: (signature)	Date:	Time:	Received by: (signature)	Date:	Time:
Andrew Dorn	02-17-11	1700	Nicola Dr	2-18-11	800
Nicola Dr	2-18-11	1224	Sherry L. Hoffman	2-18-11	12:24

Please return cooler/ice chest to Geological Technics Inc.

Rev. 2/2009

Argon Laboratories Sample Receipt Checklist

Client Name: Geological Technics Date & Time Received: 02/18/11 12:24

Project Name: Springtown Gas Client Project Number: 1409.2

Received By: SH Matrix: Water ☑ Soil ☐ Sludge ☐

Sample Carrier: Client ☑ Laboratory ☐ Fed Ex ☐ UPS ☐ Other ☐

Argon Labs Project Number: L102032

Shipper Container in good condition? N/A____	Yes ☑	No ☐		Samples received in proper containers?	Yes ☑	No ☐	
				Samples received intact?	Yes ☑	No ☐	
Samples received under refrigeration?	Yes ☑	No ☐		Sufficient sample volume for requested tests?	Yes ☑	No ☐	
Chain of custody present?	Yes ☑	No ☐		Samples received within holding time?	Yes ☑	No ☐	
Chain of Custody signed by all parties?	Yes ☑	No ☐		Do samples contain proper preservative? N/A ☐	Yes ☑	No ☐	
Chain of Custody matches all sample labels?	Yes ☑	No ☐		Do VOA vials contain zero headspace? (None submitted ☐)	Yes ☑	No ☐	

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments:

Action Taken:

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments:

♥ ♣ ♦ ♠

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager:GTI

Work Order No.:
L102032

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4	L102032-01	Water	02/17/11 10:30	02/18/11 12:24
MW-101	L102032-02	Water	02/17/11 11:05	02/18/11 12:24
MW-102	L102032-03	Water	02/17/11 11:50	02/18/11 12:24
MW-103	L102032-04	Water	02/17/11 13:10	02/18/11 12:24
STMW-2	L102032-05	Water	02/17/11 14:20	02/18/11 12:24
STMW-1	L102032-06	Water	02/17/11 14:35	02/18/11 12:24
STMW-3	L102032-07	Water	02/17/11 14:50	02/18/11 12:24
P-1	L102032-08	Water	02/17/11 15:20	02/18/11 12:24

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager: GTI

Work Order No.: L102032

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-4 (L102032-01) Water Sampled: 17-Feb-11 10:30 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*92 %*			"	"	
MW-101 (L102032-02) Water Sampled: 17-Feb-11 11:05 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*99 %*			"	"	

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Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager:GTI

Work Order No.: L102032

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
MW-102 (L102032-03) Water Sampled: 17-Feb-11 11:50 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*95 %*			"	"	
MW-103 (L102032-04) Water Sampled: 17-Feb-11 13:10 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*95 %*			"	"	

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argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager:GTI

Work Order No.:
L102032

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-2 (L102032-05) Water Sampled: 17-Feb-11 14:20 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*100 %*			"	"	
STMW-1 (L102032-06) Water Sampled: 17-Feb-11 14:35 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	**4.2**	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*103 %*			"	"	

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Argon Laboratories, Inc. California D.O.H.S. Cert. #2359

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager: GTI

Work Order No.: L102032

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-3 (L102032-07) Water Sampled: 17-Feb-11 14:50 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*100 %*			"	"	
P-1 (L102032-08) Water Sampled: 17-Feb-11 15:20 Received: 18-Feb-11 12:24							
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	21-Feb-11	EPA 8260B	
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
Methanol	ND	50	"	"	"	"	
Ethanol	ND	5.0	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	**1.9**	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		*96 %*			"	"	

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

Project Number: 1409.2
Project Name: Springtown Gas
Project Manager: GTI

Work Order No.: L102032

TPH-gas & Volatile Organic Compounds by GC/MS - Quality Control

Argon Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L100314 - EPA 5030B										
Blank (L100314-BLK1)				Prepared & Analyzed: 02/21/11						
Surrogate: Fluorobenzene	*57.5*		*ug/L*	*50*		*115*	*70-130*			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Xylenes, total	ND	1.0	"							
Ethyl Benzene	ND	0.5	"							
t-Butanol	ND	5.0	"							
Methyl tert-Butyl Ether	ND	0.5	"							
Di-Isopropyl Ether	ND	0.5	"							
Ethyl tert-Butyl Ether	ND	0.5	"							
tert-Amyl Methyl Ether	ND	0.5	"							
LCS (L100314-BS1)				Prepared & Analyzed: 02/21/11						
Methyl tert-Butyl Ether	25.6		ug/L	25		102	80-120			
LCS Dup (L100314-BSD1)				Prepared & Analyzed: 02/21/11						
Methyl tert-Butyl Ether	27.9		ug/L	25		112	80-120	9	20	
Matrix Spike (L100314-MS1)	**Source: L102032-01**			Prepared & Analyzed: 02/21/11						
Total Petroleum Hydrocarbons @ Gasoline	1190		ug/L	1000	ND	119	70-130			
Matrix Spike Dup (L100314-MSD1)	**Source: L102032-01**			Prepared & Analyzed: 02/21/11						
Total Petroleum Hydrocarbons @ Gasoline	1180		ug/L	1000	ND	118	70-130	0.7	20	

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359

argon laboratories 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Geological Technics, Inc. 1101 7th Street Modesto, CA 95354	Project Number: 1409.2 Project Name: Springtown Gas Project Manager: GTI	Work Order No.: L102032

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359

Appendix C

Groundwater Monitoring Field Notes

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: STMW-1

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
13:52	0.00	10.50	295	7.89	246.2	15.74	Clear, no odor, no sediments
13:58	2.25	16.39	303	8.04	241.6	48.94	Clear, no odor, no sediments
14:04	4.50	16.89	342	8.23	243.9	38.02	Clear, no odor, no sediments
14:10	6.75	17.55	365	8.10	241.3	44.57	Clear, no odor, no sediments
14:35							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.38 gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	19.17
Silt Thickness (ft):	0.83
Initial DTW (ft):	5.96
Water column height (ft):	13.21
One casing volume (gal):	2.25
** Final DTW (ft):	12.96
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☒ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: STMW-2

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
13:20	0.00	10.00	318	8.06	231.1	26.51	Light brown, no odor, a lot of sediments
13:26	2.25	18.21	428	8.03	237.0	48.12	Light brown, no odor, a lot of sediments
13:36	4.50	17.26	411	8.13	239.2	36.31	Light brown, no odor, a lot of sediments
13:40	6.75						
14:20							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: _____ - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	19.69
Silt Thickness (ft):	0.31
Initial DTW (ft):	7.74
Water column height (ft):	11.95
One casing volume (gal):	2.03
** Final DTW (ft):	16.03
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: Well purged Dry at 5.5 gallons.

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: STMW-3

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
14:16	0.00	11.28	217	7.66	267.4	26.17	Light brown, very mild odor, very few sediments
14:20	2.00	17.15	241	8.22	236.7	53.56	Light brown, very mild odor, very few sediments
14:25	4.00	17.81	274	8.16	247.6	46.85	Light brown, very mild odor, very few sediments
14:30	6.00	18.21	241	8.14	249.0	39.47	Light brown, very mild odor, very few sediments
14:50							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.43 gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	19.59
Silt Thickness (ft):	0.41
Initial DTW (ft):	8.87
Water column height (ft):	10.72
One casing volume (gal):	1.82
** Final DTW (ft):	15.48
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: MW-4

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:06	0.00	9.63	1413	7.10	255.6	8.22	Clear, no odor, very few sediments
10:12	2.00	18.19	1456	7.28	236.2	0.16	Clear, no odor, very few sediments
10:19	4.00	18.06	1458	7.28	232.2	0.14	Clear, no odor, very few sediments
10:25	6.00	18.14	1459	7.28	229.4	0.13	Clear, no odor, very few sediments
10:30							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.32 gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	9.47
Water column height (ft):	10.84
One casing volume (gal):	1.84
** Final DTW (ft):	9.47
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 2/17/2011

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
14:36	0.0	13.70	402	7.93	240.2	65.11	Light brown, very mild odor, few sediments
14:46	8.0	17.43	365	8.67	195.2	53.80	Light brown, very mild odor, few sediments
14:56	16.0	17.72	377	8.69	205.1	42.07	Light brown, very mild odor, few sediments
	24.0						
15:20							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: _____ - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	19.52
Silt Thickness (ft):	0.48
Initial DTW (ft):	7.3
Water column height (ft):	12.22
One casing volume (gal):	2.08
** Final DTW (ft):	7.84
Casing diameter (in):	4"

Sample Containers used:

4	# VOAs	X preserved ____ non-preserved
_____	# amber liters	_____ preserved ____ non-preserved
_____	# polys _____	_____ preserved ____ non-preserved
_____	# polys _____	_____ preserved ____ non-preserved

Notes: Well purged Dry at 19 gallons.

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: MW-101

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:36	0.0	10.94	462	7.86	234.4	23.15	Clear, no odor, no sediments
10:46	5.5	19.19	1125	7.33	262.8	40.59	Clear, no odor, no sediments
10:52	11.0	19.25	1125	7.32	264.9	39.89	Clear, no odor, no sediments
11:00	16.5	19.27	1126	7.32	266.3	38.97	Clear, no odor, no sediments
11:05							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.69 gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	6.71
Water column height (ft):	31.53
One casing volume (gal):	5.36
** Final DTW (ft):	6.71
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 2/17/2011

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
11:15	0.00	16.73	348	7.33	272.4	40.71	Clear, no odor, very few sediments
11:25	5.25	19.38	1092	7.32	265.9	17.19	Clear, no odor, very few sediments
11:35	10.50	19.05	1094	7.30	263.1	17.81	Clear, no odor, very few sediments
11:45	15.75	19.18	1094	7.30	261.8	21.70	Clear, no odor, very few sediments
11:50							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.53 gal/min

Well Constructed TD (ft):	40.00
* Well TD (ft):	39.12
Silt Thickness (ft):	0.88
Initial DTW (ft):	8.30
Water column height (ft):	30.82
One casing volume (gal):	5.24
** Final DTW (ft):	8.31
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Groundwater Monitoring Field Log

Project Name: Springtown Gas (Blue Bell)

Well I.D.: MW-103

Project No.: 1409.2

Date: 2/17/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Samples sent to: Argon

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
12:43	0.0	13.70	235	8.74	195.2	41.59	Clear, no odor, no sediments
12:50	4.5	19.20	1388	7.24	260.0	66.02	Clear, no odor, no sediments
12:56	9.0	19.00	1386	7.23	271.0	61.70	Clear, no odor, no sediments
13:06	13.5	18.74	1389	7.21	282.1	54.71	Clear, no odor, no sediments
13:10							Collected samples

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other _____

Pumping Rate: 0.59 gal/min

Well Constructed TD (ft):	35.00
* Well TD (ft):	34.18
Silt Thickness (ft):	0.82
Initial DTW (ft):	8.34
Water column height (ft):	25.84
One casing volume (gal):	4.39
** Final DTW (ft):	8.41
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs X preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: A. Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics Inc.

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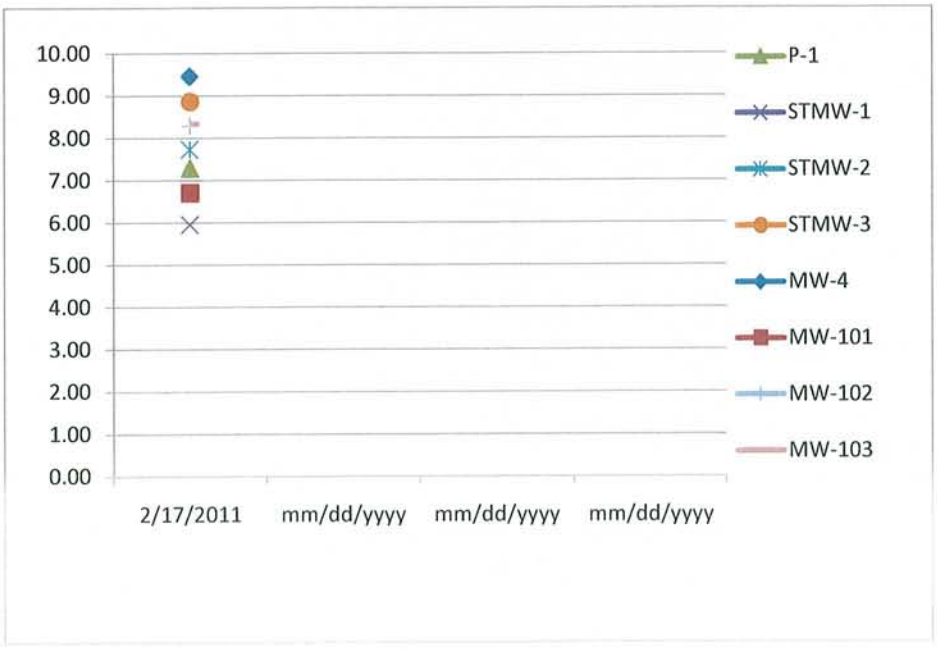
SPRINGTOWN GAS (BLUE BELL) 1409.2
909 BLUE BELL DRIVE, LIVERMORE

MONITORING WELL FIELD SUMMARY LOG 2010
DEPTH TO WATER MEASUREMENTS

	QTR. 1	QTR. 2	QTR. 3	QTR. 4	WELL
DATE	2/17/2011	mm/dd/yyyy	mm/dd/yyyy	mm/dd/yyyy	TD
	(ft)	(ft)	(ft)	(ft)	
LOCATION					
P-1	7.30				20.00
STMW-1	5.96				20.00
STMW-2	7.74				20.00
STMW-3	8.87				20.00
MW-4	9.47				20.00
MW-101	6.71				37.00
MW-102	8.30				40.00
MW-103	8.34				35.00

*TD Total Depth



NOTE:
ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMANENT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.

Peroxide Injection Field Log

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 3/9/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 3/9/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-3

Date: 3/9/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 30

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 3/9/2011

Gallons injected: 20

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 20

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 3/9/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 3/9/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 3/8/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 3/8/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-3

Date: 3/8/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 3/8/2011

Gallons injected: 8

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 3/8/2011

Gallons injected: 32

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 3/8/2011

Gallons injected: 33

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 3/1/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Well I.D.: STMW-2

Project No.: 1409.2

Date: 3/1/2011

Project Location: 909 Bluebell Drive

Livermore, CA

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-3

Date: 3/1/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 30

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 3/1/2011

Gallons injected: 20

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 20

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 3/1/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 3/1/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 3/3/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 3/3/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 3/3/2011

Gallons injected: 20

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 20

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 3/3/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 3/3/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0.00

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 2/3/2011

Gallons injected: 8

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 8

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 2/3/2011

Gallons injected: 8

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 8

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-3

Date: 2/3/2011

Gallons injected: 26

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 26

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 2/3/2011

Gallons injected: 16

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 16

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 2/3/2011

Gallons injected: 24

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 24

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 2/3/2011

Gallons injected: 28

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 28

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 2/18/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☒ Yes ☐ No

No. of Drums: 4.5

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 2/18/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 5

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 2/18/2011

Gallons injected: 20

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 20

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 2/18/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 2/18/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 25

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-103

Date: 2/18/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 30

Notes:

Sampled By: E. Nona

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 2/22/2011

Gallons injected: 5.5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 2/22/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-3

Date: 2/22/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 2/22/2011

Gallons injected: 22

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 2/22/2011

Gallons injected: 25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 2/22/2011

Gallons injected: 27.5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ❑ Dedicated Waterra ❑ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ❑ Other ❑

* = measured ** = @ sampling

Purged Water Drummed: ❑ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-1

Date: 2/24/2011

Gallons injected: 5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: STMW-2

Date: 2/24/2011

Gallons injected: 5.25

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: 0

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: P-1

Date: 2/24/2011

Gallons injected: 19.5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	20.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	4"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-101

Date: 2/24/2011

Gallons injected: 29.5

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	37.00
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	2"

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-102

Date: 2/24/2011

Gallons injected: 35

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
10:20							

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Geological Technics, Inc.

Peroxide Injection Field Log

Project Name: Springtown Gas

Project No.: 1409.2

Project Location: 909 Bluebell Drive

Livermore, CA

Well I.D.: MW-103

Date: 2/24/2011

Gallons injected: 30

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Injection Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other Gravity fed injection

Pumping Rate: - gal/min

Well Constructed TD (ft):	-
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	-
Water column height (ft):	-
One casing volume (gal):	-
** Final DTW (ft):	-
Casing diameter (in):	-

Peroxide % 50%

Dilute Peroxide % 7%

Water (gal) 94

Notes:

Sampled By: A. Dorn

Sample Method: N/A ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48