2.0 SCOPE OF WORK PERFORMED

URS investigated soil and surface water quality, in varying combinations, at each of 11 Wellsites in response to allegations made by Ex. 6 - Personal Privacy that various natural gas well drilling fluids and petroleum products were released to the environment and 2 additional Wellsites based on other information as described in more detail in **Section 4.0** of this report. The Wellsites and pad areas included in this investigation are listed below:

- Black 1H
- Brooks 1H
- W. Chudleigh 1
- Costello 1
- Ely 1H/5H/7H SE
- Ely 2
- Ely 4/6H
- Gesford 2/7H NW
- Gesford 3/9
- Lewis 2
- Teel 5
- Teel 6
- Teel 7

A variety of analytical suites were assigned to each Wellsite investigation based on the nature of the purported releases in order to confirm or refute the presence of the allegedly released substances. Regulated metals and organic compounds were analyzed in addition to a series of indicator parameters that could be attributable to the fluids alleged to have been released. For example, hydraulic fracturing fluids have surfactants added; therefore, analysis for the presence of surfactants (MBAS) as an indicator parameter was performed where such fluids were purported to have been released as an indicator parameter. It should also be noted that MBAS can be associated with other human activities and can also be naturally-occurring. The target analytes are not all regulated with a Medium Specific Concentration (MSC) for human health risk or cleanup; however, each is considered to be an indicator parameter the presence of which at or above threshold concentrations could

indicate that a past release may have occurred, which may require further investigation or evaluation to confirm. The sections that follow describe the allegations made and the scope of investigation conducted in response to each allegation.

URS collected and analyzed field duplicate samples of soil and surface water at selected locations as a quality check on the reproducibility of field sampling and laboratory analytical methods. Where collected, the duplicate sampling and analysis are indicated in the applicable sections below.

For the purposes of completeness and thoroughness of this investigation, Ex. 6 - Personal Privacy allegations are stated as plainly and as candidly as possible as presented by Ex. 6 - Personal Privacy

2.1 BLACK 1H WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy asserts that there is a drill pit that continues to leach black liquid and the pit should have been removed. He alleges that the spring has been contaminated and that fish were killed in a nearby pond.

2.1.1 Approach to Investigate Allegations – Black 1H Wellsite

URS collected surface water samples at two locations and analyzed them for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts. One catchment basin and the outlet from the adjacent pond (both immediately downgradient of the seep area from the Wellsite) were sampled.

As discussed with PADEP (12/18/09), URS advanced 2 soil test boreholes immediately downgradient of the location of the reserve pit. URS examined and logged the subsurface materials for visible indications of impacts. The soil sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**). Analytical results from soil and surface water sampling were evaluated to address the allegation that materials in the pit could represent an ongoing release to seep and/or the pond.

URS reviewed reports submitted on behalf of Cabot regarding the disposition of the remediation system currently in place at the Wellsite.

2.2 BROOKS 1H WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that 168,000 gallons of fluids were put down the well and approximately 16,000 gallons came back, and that fluid purportedly ran down the hillside and into a nearby creek. Ex. 6 - Personal Privacy further alleged that there were soap suds in the creek, which Ex. 6 - Personal Privacy claims to have contained by digging a hole with a bulldozer until the water was "sucked up" and put into frac tanks.

2.2.1 Approach to Investigate Allegations – Brooks 1H Wellsite

URS dug test pit excavations at 9 locations distributed across the Wellsite and collected 18 soil samples (at 1-2 ft. and 3-4 ft. below ground surface [bgs] at each location). In addition, URS collected surface water samples from the nearby creek located to the north and northeast. Surface water and soil samples were analyzed for the Extended Analytical Suite **(Appendix A – Tables 1 and 2, respectively)** to evaluate for potential impacts from Wellsite operations.

2.3 W. CHUDLEIGH 1 WELLSITE

Ex. 6 - Personal Privacy alleged that brine water was trucked to this Wellsite and deposited in the mud pit. Interviews with Wellsite personnel identified the material as three truckloads of drilling fluid, not brine, from the Hunsinger well. Tears in the mud pit liner that could have allowed fluids to infiltrate the subsurface were allegedly observed before the drilling fluid was off-loaded here.

2.3.1 Approach to Investigate Allegations – W. Chudleigh 1 Wellsite

URS collected surface water samples at two locations and analyzed them for the Extended Analytical Suite **(Appendix A – Table 1)** to evaluate for potential impacts. The most immediate potential downgradient receptor stream was identified and sampled, both upgradient and downgradient of the Wellsite.

URS further evaluated for releases from the drill pit by advancing two soil test boreholes immediately downgradient of the location of the drill pit. URS visually examined and logged the subsurface materials for indication of impacts. The sample(s) were analyzed for the Pit/Frac Analytical Suite **(Appendix A – Table 2)**.

2.4 COSTELLO 1 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy contends that the drill pit liner was ripped open in the middle of winter and that a GasSearch Drilling Services Corporation (GDS) supervisor told him not to be concerned and that it would be taken care of.

2.4.1 Approach to Investigate Allegations – Costello 1 Wellsite

URS collected surface water samples at three locations in the creek immediately to the east of Costello 1 well pad. Samples were collected upgradient and downgradient of the Wellsite and analyzed them for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts. Analytical results from surface water sampling were evaluated to address the allegation that impacts from the pit could potentially have affected the environment.

URS contacted the neighbor immediately downgradient of the Wellsite and inquire about Ex. 6 - Personal Privacy further allegation that their water was discolored for a period of time. URS worked with Cabot's water sampling firm, Quantum Analytical & Environmental Laboratories, Inc. (Quantum), to collect a sample of the neighbor's water before any treatment is performed.

As discussed with PADEP (12/18/09), URS advanced two soil test boreholes immediately downgradient of the location of the reserve pit. URS examined and logged the subsurface materials for indications of impacts. The soil sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**).

2.5 ELY 1H/5H/7H SE WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that the drill pit was improperly solidified and was backfilled. Ex. 6 - Personal Privacy further contends that diesel fuel spills occurred beneath the drill rig and that attempts were made to cover the spills with plastic. He is concerned that these spills present a risk to his home, property and the creek nearby.

2.5.1 Approach to Investigate Allegations – Ely 1H/5H/7H SE Wellsite

URS conducted test pit excavations at four locations distributed across the Wellsite in the reported vicinity of the drill rig and where releases were alleged to have occurred. Eight soil samples were collected (at 1-2 ft. and 3-4 ft. bgs in each test pit) and analyzed for the PA

Short List for Diesel releases (**Appendix A – Table 2**) to evaluate for potential impacts. A visual inspection of this location indicated that there is no creek nearby; however, URS traversed the hillside immediately below the Wellsite to evaluate for seeps.

As discussed with PADEP (12/18/09), URS evaluated for releases from the two reserve pits that were closed on the pad by advancing four soil test boreholes immediately downgradient of the location of the reserve pits. URS visually examined and logged the subsurface materials for indications of impacts. The sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**).

2.6 ELY 2 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that a GDS supervisor ordered a GDS employee to throw stones to puncture the reserve pit liner so as to give the appearance that Ex. 6 - Personal Privacy sabotaged the Wellsite. Ex. 6 - Personal Privacy alleges that the holes in the pit liner allow material from the pit to be released through the liner, threatening the spring that is used for drinking and bathing.

2.6.1 Approach to Investigate Allegations – Ely 2 Wellsite

URS collected surface water samples at two locations and analyzed them for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts, one at the spring located upgradient of the Wellsite and one in the creek fed by the spring, downgradient of the Wellsite and immediately to the east of Wellsite. Analytical results from surface water sampling were evaluated to address the allegation that impacts from the pit could have affected the adjacent spring and creek to the east.

As discussed with PADEP (12/18/09), URS evaluated for releases from the drill pit that was closed on the pad by advancing two soil test boreholes immediately downgradient of the location of the drill pit. URS visually examined and logged the subsurface materials for indications of impacts. The sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**).

2.7 ELY 4H/ELY 6H WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy says that hydraulic fracturing fluid was released during the fracturing process. Ex. 6 - Personal Privacy house, immediately downhill from the Wellsite, had to be evacuated and he is concerned that his Ex. 6 - Personal Privacy water supply and pond have been impacted.

2.7.1 Approach to Investigate Allegations – Ely 4H/Ely 6H Wellsite

URS dug test pit excavations at seven locations distributed across the Wellsite, collected 14 soil samples (at 1-2 ft. and 3-4 ft. bgs at each location), and collected water samples from the Spring House and Pond. Soil and surface water samples were analyzed for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts.

2.8 GESFORD 2/7H NW WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that a diesel fuel spill occurred but was reported to PADEP as a soap discharge. The spilled material can purportedly be found six inches below the gravel, as it was covered with stone.

Ex. 6 - Personal Privacy alleges that, approximately six weeks before the interview, recycled water leaked from a tank and impacted with black water a 25' x 15' area that was not fully compacted and thus was porous. Ex. 6 - Personal Privacy further alleges that he was directed to cover the spilled material up and that he refused. Ex. 6 - Personal Privacy did not contend that any material had left the Wellsite.

2.8.1 Approach to Investigate Allegations – Gesford 2/7H NW Wellsite

URS conducted test pit excavations at 16 locations distributed across the Wellsite to include the areas identified by Ex. 6 - Personal Privacy to have been impacted by frac water and diesel fuel and collect 32 samples (at 1-2 ft. and 3-4 ft. bgs at each location). These soil samples were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**) to evaluate for potential impacts from Wellsite operations.

2.9 GESFORD 3/9 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges there were issues with four different pits at this site, that there were various spills including a large diesel fuel spill. His concern is heightened

because his home is located nearby and below this site. He asserts that PADEP knew about one diesel spill, but not a second spill that occurred. He says the second spill was not reported to PADEP and was intentionally covered up with stone. He says PADEP eventually came out and learned that the spill was covered up. Ex. 6 - Personal Privacy also asserts a material that looked like antifreeze accumulated in the well cellar and was not addressed for months.

Ex. 6 - Personal Privacy also contends there was a pile of dirt mixed with diesel fuel on the back side of the site that remained "all summer long" close to a nearby creek that flows past Ex. 6 - Personal Privacy home. He said PADEP sampled the situation and found diesel fuel and that all the dirt was hauled away thereafter.

2.9.1 Approach to Investigate Allegations – Gesford 3/9 Wellsite

URS collected surface water samples at two locations and analyzed them for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts. The creek immediately adjacent to the east of the Wellsite, both upgradient and downgradient of the Wellsite was sampled. Analytical results and reports prepared for and by Cabot from previous surface water sampling were evaluated to address the allegation that impacts from the pits could potentially have affected the adjacent creek.

The location PADEP has documented to have diesel fuel impacts (the area between the former location of the drill rig and the former location of the mud pump) was identified and test pit excavations will be dug at six locations placed to target the area of most likely to have been impacted by the alleged release across the identified area. Two samples from each test pit were collected (at 1-2 ft. and 3-4 ft. bgs at each location). These soil samples were analyzed for the PA Short List for Diesel (**Appendix A – Table 2**) to evaluate for potential impacts. The test pits were also visually inspected for evidence of drilling mud.

As discussed with PADEP (12/18/09), URS evaluated for releases from the reserve pit that was closed on the pad by advancing four soil test boreholes immediately downgradient of the location of the reserve pit. URS visually examined and logged the subsurface materials for indications of impacts. The sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**).

2.10 LEWIS 2 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy asserts that a diesel fuel spill occurred that "laid there all winter" and was reclaimed into the soil bank approximately one year ago when the site was restored to previous grade. Ex. 6 - Personal Privacy feels that several drill pits have been improperly reclaimed and that the liners were carelessly torn in the process of solidifying pit contents.

2.10.1 Approach to Investigate Allegations – Lewis 2 Wellsite

URS collected surface water samples at two locations and analyzed them for the Extended Analytical Suite (**Appendix A – Table 2**) to evaluate for potential impacts from Wellsite operations. The creek immediately to the east of Lewis 2 Wellsite, both upgradient and downgradient of the Wellsite, was sampled. Analytical results from surface water sampling in the adjacent creek was evaluated to address the allegation that impacts from the pit could have affected the creek.

The location of the area where the soil that was allegedly impacted with diesel was identified and test pit excavations were conducted at four locations distributed across the identified area with 8 samples collected (at 1-2 ft. and 3-4 ft. bgs at each location). The test pit soil samples were analyzed for the PA Short List for Diesel (**Appendix A – Table 2**) to evaluate for potential impacts.

As discussed with PADEP (12/18/09), URS evaluated for releases from the reserve pit that was closed on the pad by advancing two soil test boreholes immediately downgradient of the location of the reserve pit. URS visually examined and logged the subsurface materials for indications of impacts. The soil boring sample(s) were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**) to evaluate for potential impacts.

2.11 TEEL 5 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that a spill of diesel fuel occurred and that it was reported to PADEP but the amount was considerably underreported. He asserts that as much as 3,000 gallons was spilled and that it was "all through" the nearby creek area. He further alleges that although the spill occurred in the middle of the night, it was not addressed until 6 a.m. He also asserts that the spill remediation measures were not adequate and that better measures should have been used. He says he believes a GDS supervisor

intentionally moved a reference point hay bale so that PADEP would incorrectly obtain a clean post-remediation soil sample. He asserts that diesel fuel can still be found at that site two feet under the soil/rock surface and that it is leaching into Meshoppen Creek.

Ex. 6 - Personal Privacy also alleges that the reserve pit was not properly closed – that despite solidification efforts, material continued to "ooze" out and the pit was covered with twenty to thirty feet of soil when the Wellsite was reclaimed.

2.11.1 Approach to Investigate Allegations – Teel 5 Wellsite

URS reviewed reports submitted on behalf of Cabot, including a report prepared by Resource Environmental Management, Inc., 8 Ridge Street, Montrose, PA, which was submitted to the PADEP for the Teel Property. (Notice was published in the PA Bulletin on October 11, 2008).

URS prepared an Act 2 Final Report that evaluated the diesel release that occurred on June 3, 2008, the remediation to address impacts, and demonstrated attainment with the SHS R-U MSCs for the PA Short List for Diesel for the Site. URS re-evaluated the results and conclusions of this report as part of this report addressing Ex. 6 - Personal Privacy allegations.

URS collected surface water samples at three locations: Meshoppen Creek, both upgradient and downgradient of the Wellsite; and the pond immediately downgradient of the Wellsite. These samples were analyzed for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts. Analytical results from surface water sampling will be evaluated to address the allegation that impacts from the pit could have affected Meshoppen Creek and the nearby pond.

As discussed with PADEP (12/18/09), URS evaluated for releases from the reserve pit that was closed on the pad by advancing two soil test boreholes immediately downgradient of the location of the reserve pit. URS visually examined and logged the subsurface materials for indications of impacts. The samples were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**) for evidence of impacts.

2.12 TEEL 6 WELLSITE

As a result of Cabot's additional investigation, interviews with GDS personnel indicated that a drum containing petroleum products and antifreeze was buried at a location on the drill pad and subsequently excavated and removed from the location; however, the excavated drum allegedly contained only a portion of the material present when the drum was buried. This material in the subsurface could potentially enter Meshoppen Creek.

2.12.1 Approach to Investigate Allegations – Teel 6 Wellsite

URS interviewed multiple GDS employees to evaluate for the location at which the drum was allegedly buried before it was excavated and removed from the Wellsite. Once the burial location was identified, URS excavated a large test pit and collected 12 samples (four at 1-2 ft. bgs, four at the approximate depth of alleged burial of the drum, and four at 1-2 ft. below the approximate depth of alleged burial of the drum). These soil samples were analyzed for a list of parameters consisting of the PA Short List of Petroleum Products (**Appendix A – Table 2**) and ethylene glycol, to evaluate for potential impacts.

URS also collected surface water samples at two locations on Meshoppen Creek, one upgradient and one downgradient of the Wellsite. These samples were analyzed for parameters on the PA Short List of Petroleum Products (**Appendix A – Table 2**). Analytical results from sampling were evaluated to address the concern that the buried drum could potentially have released material both to the subsurface and Meshoppen Creek.

2.13 TEEL 7 WELLSITE

Ex. 6 - Personal Privacy Allegation: Ex. 6 - Personal Privacy alleges that the drill pit was not properly closed and that materials continued to ooze out. He expressed concern for sinking into the area where the pit is located and that materials could contaminate Meshoppen Creek.

2.13.1 Approach to Investigate Allegations – Teel 7 Wellsite

URS collected surface water samples at three locations: Meshoppen Creek, both upgradient and downgradient of the Wellsite; and the wetland immediately downgradient of the Wellsite, and analyzed them for the Extended Analytical Suite (**Appendix A – Table 1**) to evaluate for potential impacts. Analytical results from surface water sampling were evaluated to address

the allegation that impacts from the pit could have affected Meshoppen Creek and the nearby wetland.

As discussed with PADEP (12/18/09), URS evaluated for releases from the reserve pit that was closed on the pad by advancing two soil test boreholes immediately downgradient of the location of the reserve pit. URS visually examined and logged the subsurface materials for indications of impacts. The samples were analyzed for the Pit/Frac Analytical Suite (**Appendix A – Table 2**) to evaluate for potential impacts.

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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: EPA 9045
Description: 9045 pH Soil
Client: URS Corporation - PGH PA
Date: June 10, 2010

General Information:
21 samples were analyzed for EPA 9045. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.
- ELY-4-P3C (Lab ID: 3028366031)
- ELY-4-P5B (Lab ID: 3028366030)
- ELY-4-P6A (Lab ID: 3028366037)
- ELY-4-P6B (Lab ID: 3028366039)
- ELY-4-P7A (Lab ID: 3028366033)
- ELY-4-P7B (Lab ID: 3028366035)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:
Workorder Comments:

The samples were subcontracted to Summit Environmental, 3310 Win Street, Cuyahoga Falls, OH 44223 for Glycol analysis. Results of the analysis are reported on the Summit Environmental. data tables.

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PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: EPA 6010B
Description: 6010 MET ICP
Client: URS Corporation - PGH PA
Date: June 10, 2010

QC Batch: MPRP/3950

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- Arsenic

Additional Comments:

Workorder Comments:

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PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: EPA 7471
Description: 7471 Mercury
Client: URS Corporation - PGH PA
Date: June 10, 2010

General Information:
21 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Workorder Comments:

The samples were subcontracted to Summit Environmental, 3310 Win Street, Cuyahoga Falls, OH 44223 for Glycol analysis. Results of the analysis are reported on the Summit Environmental. data tables.

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PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: EPA 8260
Description: 8260 MSV 5030 Low Level
Client: URS Corporation - PGH PA
Date: June 10, 2010

General Information:
21 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

QC Batch: MSV/6055

B: Analyte was detected in the associated method blank.
- BLANK (Lab ID: 178435)
  - Methylene Chloride

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/6073

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 179088)
  - Acetone

QC Batch: MSV/6090

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 179500)
  - 1,2,4-Trimethylbenzene
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Acetone
  - Naphthalene
  - Toluene

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PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: SM 5540C
Description: 5540C MBAS Surfactants
Client: URS Corporation - PGH PA
Date: June 10, 2010

General Information:
21 samples were analyzed for SM 5540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WET/5775

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3028366024

M3: Matrix spike recovery was outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 176965)
  - Surfactants

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Workorder Comments:

The samples were subcontracted to Summit Environmental, 3310 Win Street, Cuyahoga Falls, OH 44223 for Glycol analysis. Results of the analysis are reported on the Summit Environmental. data tables.

Analyte Comments:

QC Batch: WET/5775

2c: Sample was tumbled on 5/31/2010 and analyzed within 48 hours.

- BRK-1H-P7A ASTM (Lab ID: 3028366002)
  - Surfactants
- BRK-1H-P7B ASTM (Lab ID: 3028366004)
  - Surfactants
- BRK-1H-P8A ASTM (Lab ID: 3028366006)
  - Surfactants
- BRK-1H-P8B ASTM (Lab ID: 3028366008)
  - Surfactants
- BRK-1H-P9A ASTM (Lab ID: 3028366010)
  - Surfactants
- BRK-1H-P9B ASTM (Lab ID: 3028366012)
  - Surfactants

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PROJECT NARRATIVE

Project: KLG
Pace Project No.: 3028366

Method: SM 4500-Cl-E
Description: 4500 Chloride
Client: URS Corporation - PGH PA
Date: June 10, 2010

General Information:
21 samples were analyzed for SM 4500-Cl-E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/4361

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3028366002

M1:-Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 176863)
  - Chloride

QC Batch: WETA/4380

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3028366036

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 177686)
  - Chloride

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Workorder Comments:

The samples were subcontracted to Summit Environmental, 3310 Win Street, Cuyahoga Falls, OH 44223 for Glycol analysis. Results of the analysis are reported on the Summit Environmental. data tables.

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QUALIFIERS

Project: KLG
Pace Project No.: 3028366

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
S - Surrogate
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

WORKORDER QUALIFIERS

WO: 3028366

[1] The samples were subcontracted to Summit Environmental, 3310 Win Street, Cuyahoga Falls, OH 44223 for Glycol analysis. Results of the analysis are reported on the Summit Environmental. data tables.

BATCH QUALIFIERS

Batch: MSV/6055

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/6073

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/6090

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	ASTM BLANK
2c	Sample was tumbled on 5/31/2010 and analyzed within 48 hours.
3c	Samples were tumbled on 06/01/2010 and analyzed within 48 hours.
B	Analyte was detected in the associated method blank.
C9	Common Laboratory Contaminant.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: KLG
Pace Project No.: 3028366

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
SU	MBAS, calculated as LAS, Mol wt 342.2 g/mol

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SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

June 08, 2010

Client: Pace Analytical
Address: 1638 Roseytown Road
Greensburg, PA 15601

Received: 5/29/2010
Project #: 3028366

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	LOQ	Run	Analyst
3028366023	1008059-12	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366025	1008059-13	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366027	1008059-14	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366028	1008059-15	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366030	1008059-16	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366031	1008059-17	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366033	1008059-18	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366035	1008059-19	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366037	1008059-20	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN
3028366039	1008059-21	25-May-10	Ethylene glycol	ND	mg/kg	S	8015	1	10	04-Jun-10	JBN

"Analytical Integrity" · **EPA Certified** · **NELAP Certified**
3310 Win Street · Cuyahoga Falls, Ohio 44223 • Phone: 330-253-8211 · Fax: 330-253-4489
Web Site: www.seltek.com

URS Project for KLG

Analytical Parameters Requested
Soils and Water Samples

List	Sample Sanes	Analytical Parameters Requested													
		VOCs - TCL+Special List	SVOCs - TCL + TICS	Total Metals	Dissolved Metals	Ethylene Glycol	DRO + GRO	Acidity, Alkalinity, TDS	TPH - 1664A	Chloride	MBAS	pH	Nitrogen (as Ammonia)	PA Short List for Diesel	PA Short List for ALL Petroleum Products
	Soils														
P/F	Black 1	x	x	x		x				x	x		x		
Extended	BRK	x	x	x		x	x			x	x	x	x		
P/F	Chud	x	x	x		x				x	x		x		
P/F	Costello 1	x	x	x		x				x	x		x		
P/F	Ely 2	x	x	x		x				x	x		x		
SL4D	Ely 5 - "P samples"													x	
P/F	Ely 5 - "B samples"	x	x	x		x				x	x		x		
Extended	Ely 4/6	x	x	x		x	x			x	x	x	x		
SL4D	Gesford 3 - "P samples"													x	
P/F	Gesford 3 - "B samples"	x	x	x		x				x	x		x		
P/F	Gesford 7	x	x	x		x				x	x		x		
SL4D	Lewis 2 - "P samples"														
P/F + SL4D	Lewis 2 - "B samples"	x	x	x		x				x	x		x	x	
P/F	Teel 5	x	x	x		x				x	x		x		
SL4Petroleum Pro	Teel 6														x
P/F	Teel 7	x	x	x		x				x	x		x		
	Water														
Ext	Ely 4/6	x	x	x	x	x	x	x	x	x	x	x	x		
Ext	Chud	x	x	x	x	x	x	x	x	x	x	x	x		
PADL4D + Glycol	Teel 6					x								x	

CABOT-EPA 004577

10.0 DELIVERABLES

The following deliverables will be provided under this project:

Analytical Data

- Expedited preliminary data turnaround time (<5 days) will be provided on the following list of compounds/tests:

coliform bacteria	aluminum
bis(2-ethylhexyl) phthalate (DEHP)	arsenic
ethylene glycol	lithium
2-methoxyethanol (Ethylene glycol monomethyl ether)	manganese
methane Et Et=	sodium
2,2'oxybisethanol (diethylene glycol)	iron
triethylene glycol	

methyl cellosolve

butoxy ethoxy Ethanol

Butyl cellosolve

- With exceptions listed above, preliminary unvalidated data will be provided to the EPA OSC within 15 business days after receipt of the samples at the laboratory.

- A Data Validation Report will be provided to the EPA OSC within approximately 21 days of receipt of the laboratory analytical data package by TechLaw.

glycols
Ester

- TechLaw will incorporate the validated data from this sampling event into a Trip Report and/or After Action Report for the project.

11.0 REFERENCES

EPA, 2011. U.S. Environmental Protection Agency, *Contract Laboratory Program (CLP) Guidance for Field Samplers, Final*, Office of Solid Waste and Emergency Response (OSWER) publication EPA540-R-07-006, Washington, D.C. January.

ERT, 1994. U.S. Environmental Protection Agency Environmental Response Team. Standard Operating Procedure for Surface Water Sampling, SOP# 2013. January 26.

ERT, 1995. U.S. Environmental Protection Agency Environmental Response Team. Standard Operating Procedure for Groundwater Well Sampling, SOP# 2007. January 26.

Isotech, 2011. Isotech Laboratories, Inc., Collection of Ground Water Samples from Domestic and Municipal Water Wells for Dissolved Gas Analysis, Website Accessed December 2011: < http://www.isotechlabs.com/customersupport/samplingprocedures/DGbottle.pdf>

Property ID	NAME LAST	NAME FIRST	TENANT	Mailing_ADDRESS	Location_Address1	Location_Address2
HW-1						
HW-2						
HW-3						
HW-4						
HW-5						
HW-6						
HW-7a						
HW-7b						
HW-8a						
HW-8b						
HW-9						
HW-10						
HW-11						
HW-12						
HW-13						
HW-14						
HW-15a						
HW-15b						
HW-16						
HW-17						
HW-18						
HW-19						

Ex. 6 - Personal Privacy

CABOT -- Existing Data from CERCLA 104e Request for Information

File Edit View Favorites Tools Help

Back Search Folders

Address I:\OASQA_TSB Team\ASQAB_QAT Team\Dimock Data\Cabot

File and Folder Tasks

- Rename this file
- Move this file
- Copy this file
- E-mail this file
- Print this file
- Delete this file

Other Places

- Dimock Data
- My Documents
- My Computer
- My Network Places

Name	Size	Type	Date Modified
[illegible]	89 KB	Adobe Acrobat D...	1/20/2012 2:24 ...
Cabot PROOF w Data Presentation to DEP.pdf	30,647 KB	Adobe Acrobat D...	1/20/2012 2:36 ...
CABOT-EPA 000001 Brickhouse February 16 2010.pdf	434 KB	Adobe Acrobat D...	1/20/2012 11:27...
CABOT-EPA 000008 Brickhouse February 16 2010 (2).pdf	819 KB	Adobe Acrobat D...	1/20/2012 11:27...
CABOT-EPA 000020 Brickhouse February 17 2010.pdf	2,461 KB	Adobe Acrobat D...	1/20/2012 11:28...
CABOT-EPA 000176 TestAmerica Results August 4 2011.pdf	88,063 KB	Adobe Acrobat D...	1/20/2012 11:40...
CABOT-EPA 001621 TestAmerica Results September 1 2011.pdf	123,455 KB	Adobe Acrobat D...	1/20/2012 11:25...
CABOT-EPA 003758 URS December 2011 - Wellsite Evaluations Ar.pdf	29,019 KB	Adobe Acrobat D...	1/20/2012 12:57...
CABOT-EPA 004346 URS December 2011 - Wellsite Evaluations Ar.pdf	49,211 KB	Adobe Acrobat D...	1/25/2012 11:19...
CABOT-EPA 005566 URS Gesford 3 Well Report.pdf	2,476 KB	Adobe Acrobat D...	1/20/2012 1:14 ...
CABOT-EPA 005604 URS Hibbard 1H 3H Report.pdf	32,684 KB	Adobe Acrobat D...	1/20/2012 1:18 ...
CABOT-EPA 006221 URS Hibbard 2H 4H Report.pdf	78,431 KB	Adobe Acrobat D...	1/20/2012 1:58 ...
CABOT-EPA 007724 URS R Smith 3-H Report.pdf	5,417 KB	Adobe Acrobat D...	1/20/2012 2:04 ...
CABOT-EPA 007795 URS Teel Well 5 Report.pdf	9,443 KB	Adobe Acrobat D...	1/20/2012 2:06 ...
CABOT-EPA 007946 URS May 26 2011 Focused Site Assessment Ana.pdf	42,488 KB	Adobe Acrobat D...	1/20/2012 2:22 ...

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Date: **January 13, 2012**

SUBJECT: Review of Cabot Information

FROM: Richard M. Fetzer, OSC
Eastern Response Branch (3HS31)
Office of Preparedness and Response
Hazardous Site Cleanup Division

TO: Gerald T. Heston, Chief
Eastern Response Branch (3HS31)
Office of Preparedness and Response
Hazardous Site Cleanup Division

On January 6, 2012, EPA issued a request for information pursuant to §104(e) of CERCLA to Cabot, asking for certain information regarding drilling activities in the Dimock, Pennsylvania area, and sample results from that area.

By letters dated January 9, 2012 and January 10, 2012, Cabot supplied EPA with information and documents, in CD format that it stated were partially responsive to EPA's request. Received information includes:

1. Received January 10, 2012 - A partial response to Request No. 1 – Specifically the following subparagraphs a-e that included results for the sampling events that took place on May 11, 2011, August 4, 2011, and September 2, 2011, including analytical data from the lab. In addition, URS Report Information (December 2011).
2. Received January 10, 2012 - A response to Request No. 2 – Sample results from Test America, conducted by Plaintiff's experts, Brickhouse Environmental and results of samples analyzed by Duke University.
3. Received January 11, 2012 – A partial response to Request No 2 - Cabot's copies of PADEP testing results spanning three years.
4. Received January 12, 2012 (without letter) – A replacement CD for the January 9th submission due to some corrupted files being encountered by EPA.

Since receipt of this information, as the Lead OSC, I have delegated responsibility to other EPA OSCs and contractors to promptly review the information, and compile and analyze it. Further, I have requested these OSCs to coordinate their review with ATSDR and the Region III Water Division, and to share with them information relevant to the review of home well water quality in Dimock. Such coordination has continued on a daily basis.

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