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HAZARDOUS MATERIALS
AND WASTE MANAGEMENT

INTEGRATED CORRECTIVE ACTION PLAN APPLICATION SUMMIT CLEANERS 4730 CENTENNIAL BLVD COLORADO SPRINGS, COLORADO

RGI PROJECT NO. 14889011

July 19, 2011

PREPARED FOR:
MR. JEFF LAVELLE
SUMMIT CLEANERS
4730 CENTENNIAL BLVD
COLORADO SPRINGS, CO 80919

RESOURCE GEOSCIENCE, INC.
Consulting Environmental Engineers and Earth Scientists

July 19, 2011

Mr. Walter Avramenko
Colorado Department of Public Health and Environment
HWMWD-HWC-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Re: **Integrated Corrective Action Plan Application**
Summit Cleaners
4730 Centennial Blvd.
Colorado Springs, Colorado
RGI #14889011

Dear Mr. Avramenko:

Submitted herewith is our Integrated Corrective Action Plan Application for the above-referenced site.

The Integrated Corrective Action Plan Application was prepared to address soil impacts to the subject site that were identified in Phase I, Phase II and Phase III Environmental Site Assessments completed by Partner Engineering and Science, Inc. dated February 16, 2011, March 9, 2011, and May 17, 2011, respectively.

If you have any questions regarding this report, please contact us.

Respectfully submitted,

RESOURCE GEOSCIENCE, INC.

Matthew K. Larsen, P.G.
Vice President

Reviewed by,

Thomas B. Lewis, P.E.
President

cc: Mr. Jeff Lavelle / Summit Cleaners

INTEGRATED CORRECTIVE ACTION PLAN APPLICATION
SUMMIT CLEANERS
4730 CENTENNIAL BLVD.
COLORADO SPRINGS, COLORADO

RGI #14889011

1. INTRODUCTION

Resource Geoscience, Inc. (RGI) was contracted by Mr. Jeff Lavelle to prepare an Integrated Corrective Action Plan Application (ICAP) and provide remediation services at Summit Cleaners, 4730 Centennial Blvd., Colorado Springs, Colorado. The ICAP was prepared to address soil impacts to the subject site that were identified in Phase I, Phase II and Phase III Environmental Site Assessments completed by Partner Engineering and Science, Inc. (Partner) dated February 16, 2011, March 9, 2011, and May 17, 2011, respectively. RGI understands these reports were previously provided to the Colorado Department of Public Health and Environment (CDPHE) and are not included with this report.

2. GENERAL SITE INFORMATION

The subject property is located on the west side of Centennial Blvd., at 4730 Centennial Blvd., Colorado Springs, El Paso County, Colorado and is currently occupied by Summit Cleaners (Appendix A, Figure 1).

3. SITE HISTORY

The subject property was developed as a retail dry cleaning facility in 2000 and was previously undeveloped. For additional site history information please see the Partner Phase I Environmental Site Assessment dated February 16, 2011.

4. SITE CHARACTERIZATION

Partner completed a Phase II Environmental Site Assessment, dated March 9, 2011 at the subject site. The purpose of the investigation was to collect information regarding potential impacts of chlorinated solvents

to the subsurface as a result of historical dry cleaning operations at the site. The Phase II included completion of six (6) soil borings. Ten soil samples were collected from the six (6) soil borings and analyzed for volatile organic compounds. The investigation reported one (1) soil sample (SC-6 @ 3') with tetrachloroethene (PCE) above regulatory guidance values.

Partner completed a Phase III Environmental Site Assessment, dated May 17, 2011, to collect information regarding the horizontal and vertical extent of impacts around boring SC-6. The Phase III included completion of four (4) soil borings and collection of three (3) indoor air samples. Ten soil samples were collected from the four (4) soil borings and analyzed for volatile organic compounds. None of the soil samples analyzed were reported to have volatile organic compounds above regulatory guidance values. For additional information please see Partner's Phase II and Phase III reports that were previously provided to CDPHE.

Based on the results of Partner's Phase II and Phase III investigations it appears that PCE impacts have been defined both vertically and horizontally in the area of SC-6.

5. CORRECTIVE ACTION PLAN

To address to soil impacts identified in Partner's Phase II and Phase III reports, RGI is proposing to remove a section of the floor slab and excavate impacted soils in the vicinity of SC-6 and southwest of the dry cleaning machine.

Prior to initiating any work RGI will notify the Utility Notification Center of Colorado (UNCC). In addition, RGI will contract a private utility location service to locate utilities that may be beneath the slab and within the proposed excavation area. Following utility location activities, RGI will construct a vapor barrier isolating the remediation work space from the rest of the Summit Cleaners commercial space and from the HVAC system feeding the adjacent tenant spaces.

RGI will remove the slab and excavate impacted soils from an approximately 4-foot by 10-foot area to the southwest of the existing dry-cleaning machine, shown on Figure 2 included in Appendix A. RGI expects to excavate up to approximately four (4) feet of soil from the area. Additional excavation will be completed if needed based on onsite measurements collected using ambient temperature headspace analysis (ATHA) procedures in accordance with the Field Methods Protocol included in Appendix B. A RAE Systems MiniRAE Plus PGM-76 photoionization detector (PID) with an 11.7 eV bulb will be utilized in the field for the headspace analysis. RGI will use ATHA to guide our excavation activities in the field. All excavated soils will be placed in a water tight, covered, roll-off pending waste characterization and disposal approval. Please note that if impacted soils are encountered that extend significantly beneath the dry cleaning machine, RGI may not be able to excavate this material. If this situation is encountered RGI may install horizontal soil vapor extraction (SVE) piping beneath the dry cleaning machine for possible future use in remediation of any impacted soils that were not excavated.

Following removal of impacted soils, RGI will collect six (6) confirmatory soil samples from the excavation. One (1) sample will be collected from each sidewall and two (2) samples will be collected from the floor of the excavation. One (1) waste characterization sample will be collected from the soils stockpiled in the roll-off.

The soil samples collected will be split with one (1) portion placed into a plastic bag and screened on-site using ATHA procedures in accordance with the Field Methods Protocol included in Appendix B. One (1) duplicate, soil sample from each boring will be submitted to Technology Laboratory, Inc. in Fort Collins, Colorado for analysis. The samples will be transferred using standard RGI chain-of-custody procedures and analyzed for Volatile Organic Compounds (VOC) using EPA Method 8260B. The waste characterization sample will be analyzed for TCLP VOCs.

Following receipt of laboratory analytical results, and assuming the confirmatory samples are all below CDPHE regulatory limits, RGI will backfill the excavation and replace the concrete slab. Following receipt of the waste characterization results RGI will forward the results to CDPHE with a request for a "Contained-Out" determination and dispose of the excavated soils at an approved solid waste landfill.

RGI will then submit a No Further Action Request letter to CDPHE that describes the remedial activities taken at the site, description of the sampling methodology and locations, laboratory analytical results, and site photographs.

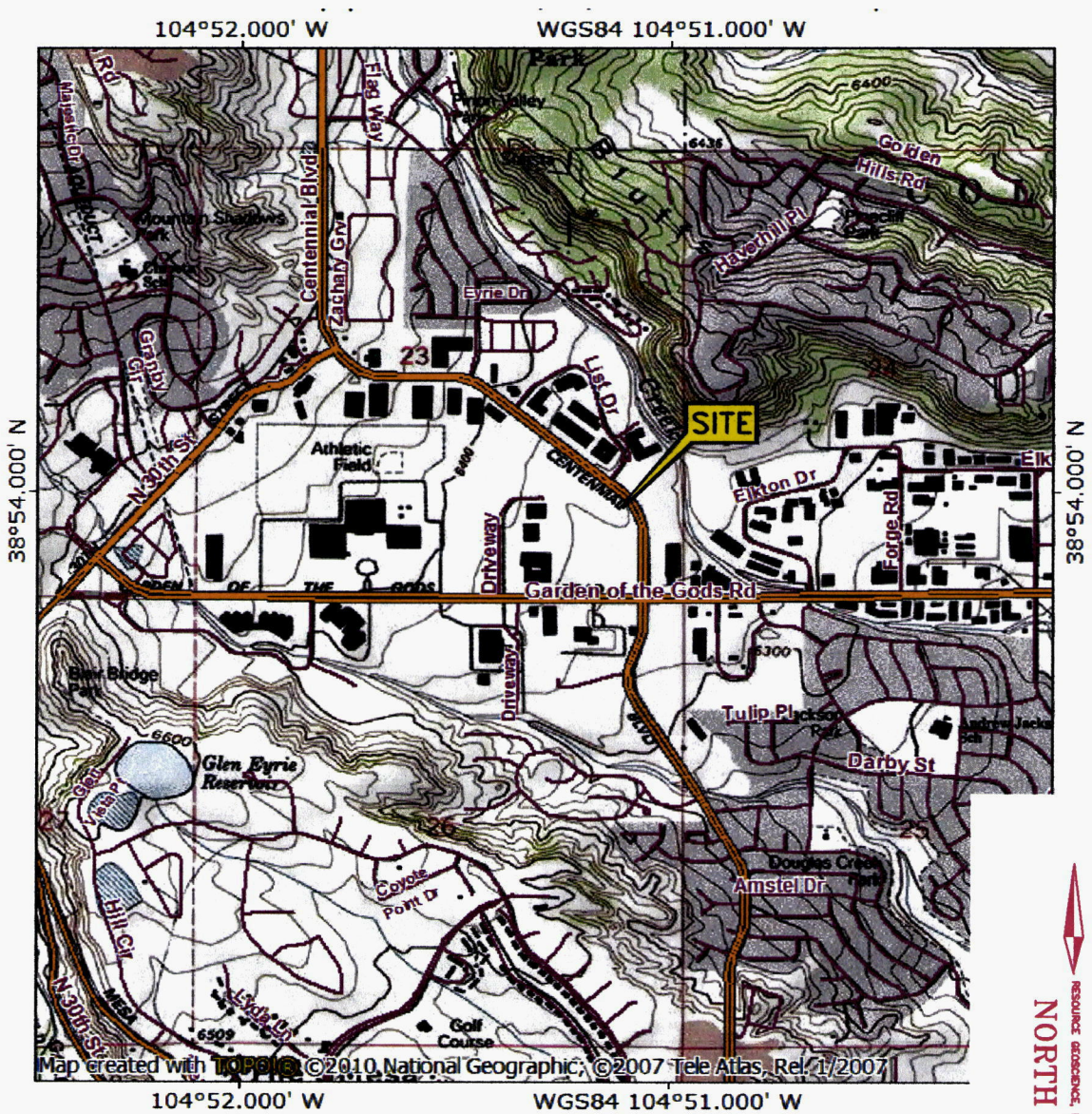
6. LIMITATIONS

Our professional services will performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the locality of the project. No warranty, express or implied, is made or intended. Resource Geoscience, Inc. is not responsible for any independent conclusions or recommendations made by others based on the services provided on this project. Contaminants may exist at other times and in areas not addressed by this ICAP.

APPENDIX A
FIGURES

SUMMIT CLEANERS
4730 CENTENNIAL BLVD
COLORADO SPRINGS, COLORADO

SITE LOCATION MAP



APPROXIMATE SCALE:
1" = 2000'

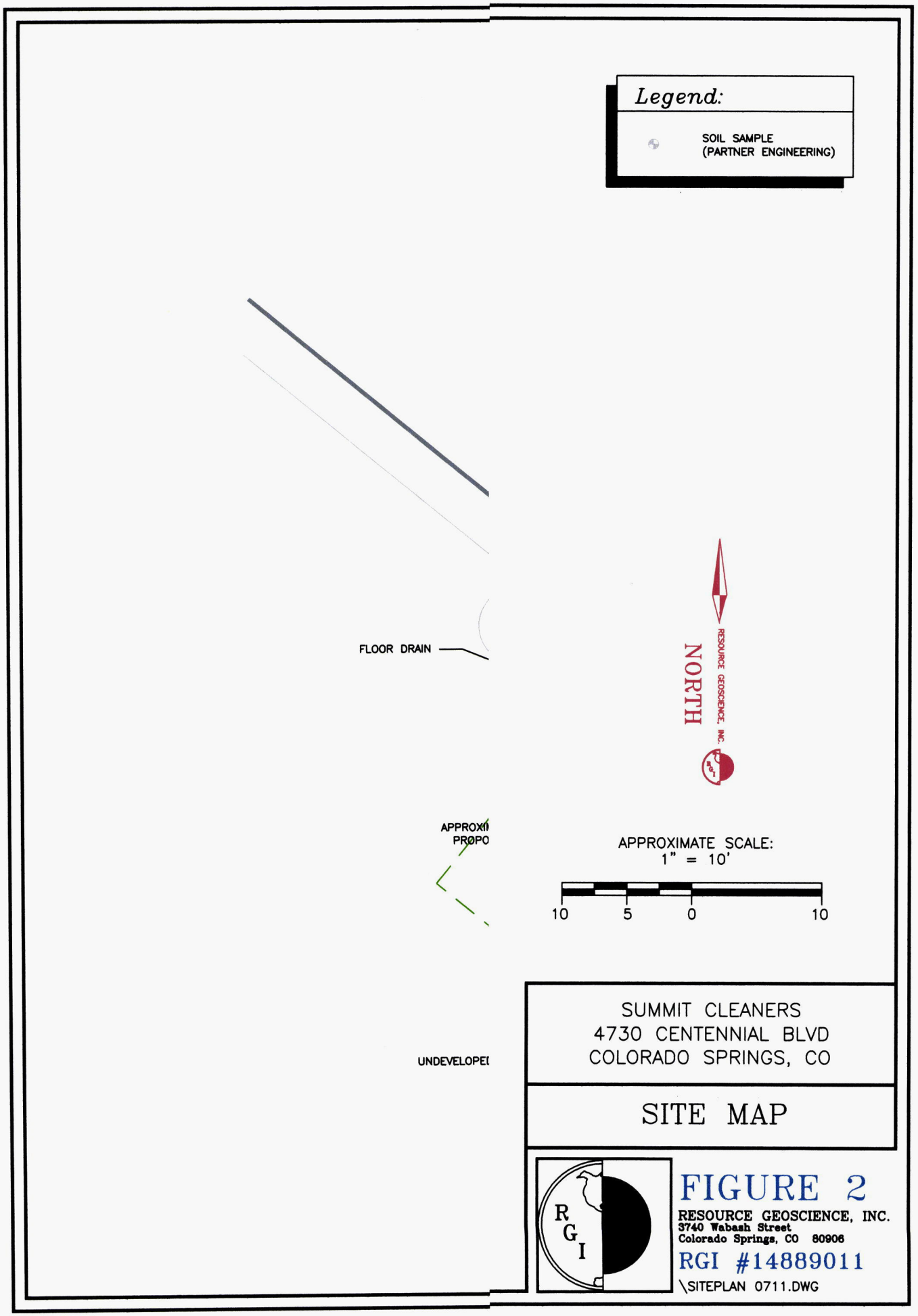
2000 1000 0 2000

FIGURE 1

RESOURCE GEOSCIENCE, INC.
3740 Wabash Street
Colorado Springs, CO 80906

RGI #14889011

TOPO MAP.dwg


Legend:
SOIL SAMPLE
(PARTNER ENGINEERING)
FLOOR DRAIN
NORTH
RESOURCE GEOSCIENCE, INC.
APPROXI
PROPO
APPROXIMATE SCALE:
1" = 10'
10
5
0
10
UNDEVELOPEI
SUMMIT CLEANERS
4730 CENTENNIAL BLVD
COLORADO SPRINGS, CO
SITE MAP
R
G
I
FIGURE 2
RESOURCE GEOSCIENCE, INC.
3740 Wabash Street
Colorado Springs, CO 80906
RGI #14889011
\SITEPLAN 0711.DWG

APPENDIX B
FIELD METHODS PROTOCOL

FIELD METHODS PROTOCOL

RESOURCE GEOSCIENCE, INC.

INTRODUCTION

This document presents the field methods protocol generally followed by Resource Geoscience, Inc. when performing field services. Included in the protocol are procedures for placement of soil borings, well construction and development, soil and water sample collection, sample preservation, shipment and testing, Quality Assurance/Quality Control Procedures, and references.

SOIL BORINGS

Prior to performing field services, the sampling program will be outlined by the project manager. The program will include the anticipated sample locations and equipment requirements. Unless other arrangements are made, utility locates will be initiated by Resource Geoscience, Inc. An appropriate Health and Safety Plan will be prepared prior to the performance of field work.

Unless otherwise required, drilling will be performed using continuous-flight, hollow stem augers. The augers and drill unit will be thoroughly decontaminated prior to arrival at the site. Borings will be logged in the field under the direction of a professional engineer. Soil samples will be collected using a split spoon sampler and standard penetration tests, unless otherwise required. Soil sampled will be collected at intervals sufficient to allow a detailed description of the subsurface conditions, generally every five (5) feet. Soil or rock-like material will be sampled in accordance with ASTM D420-69. All soil-like material will be sampled in accordance with ASTM D1452-80. The soil samples will be visually classified by the field engineer using the Unified Soil Classification System (USCS) in accordance with ASTM D2487-00.

The augers and drilling equipment will be decontaminated between borings using a high pressure hot water wash. Contaminated media generated during the decontamination procedure will be left on site, unless otherwise required by the client. If the media is considered hazardous, the material will be placed in lined and sealed 55-gallon DOT 17 H Drums. Disposal of the media is the client's responsibility.

Soil sampling equipment will be thoroughly decontaminated between sampling events. Standard decontamination includes washing with a soap/water solution followed by a rinse with clean tap water. If required, based on the parameters to be tested, the standard wash and rinse should be followed by an additional rinse using de-ionized water. Wash and rinse water will be changed between borings, or more often if necessary.

Borings not completed as monitoring wells will be abandoned by placing a bentonite plug at the base of the boring followed by backfilling with non-contaminated soil. A bentonite cap will also be constructed in the completed boring.

WELL CONSTRUCTION/DEVELOPMENT

Borings will be completed as wells when required for groundwater monitoring or site remediation. The well material, diameter, screen length, and other well construction criteria will be dependent on the well use and site conditions. In all cases, approvals from the State Engineer will be received prior to well construction.

Care will be exercised to insure that all groundwater wells are constructed in a unique water-bearing zone and that all water-bearing zones remain isolated from each other. Extreme care will be exercised to insure that the aquifers are not cross-connected by the installation of monitoring wells.

Monitoring wells will be constructed of two (2) or four (4) inch PVC pipe, factory perforated with 0.020 or 0.010 inch slotted well screen which will extend approximately five (5) feet above and five (5) feet below the upper zone of saturation, unless site

conditions require otherwise. All pipe will be of threaded construction and no solvents or glues will be used. The annulus of the perforated section will be packed with clean, graded sand with a one (1) to two (2) foot bentonite plug placed above the sand pack as a seal. The remaining annulus will be back filled with neat cement or a cement/bentonite slurry to grade.

The wells will be finished with a locking cap and key and water tight, traffic rated, vandal resistant, well-head cover set in concrete with the existing grade, unless otherwise specified. After installation, the wells will be developed by bailing, surge pumping or other suitable method to remove sediments or other material from the well. In general, development will require removal of approximately ten (10) well volumes.

SOIL SAMPLE COLLECTION

Soil samples will be prepared immediately after retrieval from the boring. In general, the soil samples will be split with a portion of the sample placed into a glass sample jar and a portion placed into a sealable plastic bag. The glass jar sample will be immediately sealed with a Teflon lined lid and a custody seal placed to prevent tampering. The glass jar sample will be placed into an ice filled cooler and a chain-of-custody will be completed.

The bag samples will be allowed to reach ambient temperature conditions. In cold weather, the bag samples will be placed into a warm area with ambient temperatures of at least 65° F. The bag samples will then be analyzed using a portable organic vapor monitor (OVM). Prior to analysis, the OVM will be calibrated using a 100 ppm isobutylene/balance air calibration gas mixture.

WATER SAMPLE COLLECTION

Wells will be developed immediately after completion by removing multiple volumes of water to stabilize the sand pack. After a period of approximately 48 hours, the wells will be purged using a disposable Teflon bailer retrieved with a disposable nylon cord. After purging, the water samples will be collected by decanting directly from the bailer using a slide-in nozzle to reduce aeration of the sample. The bailer and cord will be disposed of after each sample is collected.

The type of sample jar and preservative, if required, will depend on the parameters to be analyzed. In all cases, the sampler should wear disposable latex gloves. Sampling equipment, including retrieval lines, will not be allowed to touch the ground. The water samples will be placed immediately into a cooler with ice. A custody seal will be placed onto the sample jars and a chain-of-custody completed. The samples will be collected and containerized in the order of the parameters volatilization sensitivity.

SAMPLE PRESERVATION / SHIPMENT / TESTING

Unless the samples are immediately transported to the analytical laboratory, the samples will be stored in a refrigerated condition at $\leq 4°$ C until shipped. The samples will then be shipped in a cooler with ice via next day air or hand delivered. The chain-of-custody will remain with the samples until the analyses are complete.

The contract laboratory used will be a reputable laboratory familiar with the testing procedures of the appropriate state and the EPA procedures found in EPA Manual SW 846 and 40 CFR 136. The laboratory will be acceptable to and, if required, licensed in the state in which the investigation is being conducted.

QUALITY ASSURANCE / QUALITY CONTROL

The quality assurance (QA) plan is the process used for insuring the data are technically sound, statistically valid and properly documented. The quality control (QC) procedures are used to measure the degree to which the objectives are met.

Quality control will be performed as follows:

1. Where possible, trip blanks shall accompany samples to and from the field to detect cross-contamination during handling.
2. Field blanks will be obtained, where possible, from sampling equipment to detect cross-contamination. Field blanks will not be required where disposable sampling equipment is used.
3. Field duplicates and field spikes will be collected when necessary and requested to document precision and to determine the loss of parameters during sampling, handling and testing.

The following quality assurance procedures will also be performed:

1. A clear definition of the sampling objectives will be formulated prior to sampling.
2. A sampling plan will be in place prior to performance of the field work.
3. Field equipment will be maintained, calibrated and cleaned in accordance with the proper procedures.
4. Samples will be shipped, packaged and properly preserved in accordance with proper procedures.
5. Chain-of-custody protocols will be strictly adhered to.

REFERENCES

Colorado Risk-Based Corrective Action Implementation Workshop, CDLE Oil Inspection Section, February 23-25, 1999.

Petroleum Storage Tank Owner/Operator Guidance Document / OPS Storage Tank Regulations, Colorado Division of Oil and Public Safety, February 1, 1999.

EPA SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, Third Edition, June 1997.

API Publication 1628, A Guide to the Assessment and Remediation of Underground Petroleum Releases, Second Edition, August 1989.

Current LUFT Field Manual, State of California, State Water Resources Control Board, October 1989.

Current EPA RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September 1986.

ASTM E1739-95, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Site.

ASTM D420-98 (2003), Standard Guide to Site Characterization for Engineering, Design, and Construction Purposes.

ASTM D1452-80, Standard Guide for Site Characterization for Environmental Purposes With Emphasis on Soil, Rock, the Vadose Zone and Ground Water.

ASTM D420-69, Investigation and Sampling Soil and Rock for Engineering Purposes.

ASTM D1452-80, Standard Practice for Soil Investigation and Sampling by Auger Borings.

ASTM D2487-00, Standard Classification of Soil for Engineering Purposes.