

BGES, INC.

ENVIRONMENTAL CONSULTANTS

**FORMER CUSTOM TRUCK
4748 OLD SEWARD HIGHWAY
ANCHORAGE, ALASKA**

**BUILDING INVENTORY
FOR VAPOR INTRUSION ASSESSMENT**

MAY 2013

Submitted to:

**Andy Robblee
Six Robblee's, Inc.
11010 Tukwila International Road
Seattle, Washington 98168**

Submitted by:

**BGES, INC.
1042 East 6th Avenue
Anchorage, Alaska 99501
Ph: (907) 644-2900
Fax: (907) 644-2901**

**Eagle River Office
(907) 696-BGES (2437)**

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	FIELD ACTIVITIES	2
3.0	CONCLUSIONS.....	4
4.0	RECOMMENDATIONS.....	5
5.0	EXCLUSIONS AND CONSIDERATIONS	5

FIGURES (Located at End of report)

Figure 1	Property Vicinity Map
Figure 2	Site Location Map
Figure 3	Proposed Indoor Air Sample Locations

APPENDICES (Located at End of Report)

Appendix A	Photographs
Appendix B	Building Inventory Form

ACRONYMS

ADEC	-	Alaska Department of Environmental Conservation
bg	-	below grade
BGES	-	Braunstein Geological and Environmental Services
DRO	-	Diesel Range Organics
GRO	-	Gasoline Range Organics
RRO	-	Residual Range Organics
USTs	-	Underground Storage Tanks

1.0 INTRODUCTION

BGES, Inc. (BGES) was retained by Six Robblee's, Inc. to evaluate the property located at 4748 Old Seward Highway in Anchorage, Alaska, hereafter referred to as the subject property (Figure 1). The evaluation consisted of performing a building inventory to identify building characteristics and potential vapor entry points into the building.

Background Information. This site is listed in the Alaska Department of Environmental Conservation (ADEC) Contaminated Sites database as a Cleanup-Complete with Institutional Controls site (ADEC Hazard Identification Number 23658 and File Number 2100.26.252). The subject property previously operated for many years as an automotive dealership that utilized underground storage tanks (USTs) to store petroleum products. These USTs were removed in 1994. Six Robblees is a truck accessory and retail store and currently occupies the subject property. The fenced area located west of the building is used for bulk storage of truck tops and auto accessories.

Numerous previous site assessments have been performed by various environmental consulting firms at the site, including a 2004 Site Closure Report performed by Chemtrack. On June 14, 2004 the ADEC issued a "No Further Remedial Action Planned" status for this site. In addition, a "Record of Decision" was also issued for the site on the same date. In these documents, it has been stated that quarterly groundwater monitoring in accordance with an approved work plan must be instituted.

BGES was contracted in 2005 to review the previous work plan and to resume groundwater sampling activities in accordance with the No Further Remedial Action Planned and Institutional Control Record of Decision documentation. Groundwater monitoring was performed by BGES in June and August of 2005, March and September of 2006, and October of 2007. The results of these groundwater monitoring activities were documented in the Groundwater Monitoring Report, dated February 2013.

During 2012, BGES collected groundwater samples from existing monitoring wells located onsite and offsite. Groundwater samples collected from these monitoring wells exhibited concentrations of gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), and benzene, toluene, ethylbenzene, and total xylenes (BTEX), in excess of their respective ADEC cleanup criteria in one or more of these monitoring wells. Historically, the contaminant trend appears to be declining in almost all wells, except for DRO in MW-1 and MW2. Monitoring Wells MW13 and MW14 were sampled for the first time and exhibited analyte concentrations that were

greater than any of the other monitoring wells. These groundwater monitoring activities were documented in the Groundwater Monitoring Report dated February 2013.

Katrina Chambon, ADEC Project Manager, reviewed the Groundwater Monitoring Report and issued correspondence dated April 22, 2013. The correspondence summarized the results of the 2012 groundwater monitoring activities and requested the submittal of a work plan for the performance of a vapor intrusion evaluation; implementation of a quarterly groundwater monitoring program for Monitoring Wells MW-01, MW-2, B6VE, MW-13, MW-14, and MW-15 to evaluate seasonal trends in contaminant concentrations; and implementation of biannual monitoring for MW-5, MW-8, and MW-11, and annual monitoring of the facility drinking water well. In addition, a groundwater sample from either MW13 or MW14 must be analyzed for volatile organic compounds by Environmental Protection Agency (EPA) Method 8260.

Based on the potential for the migration of vapors into the building, a building survey was performed in accordance with the ADECs Vapor Intrusion Guidance for Contaminated Sites (October 2012) as requested in the above-referenced correspondence. Ms. Chambon was notified of the schedule for conducting the building survey so that she could be present during the building survey. The results of the building survey are the subject of this report and are described in detail below.

2.0 FIELD ACTIVITIES

The evaluation of the subject property consisted of performing a building inventory to identify building characteristics and potential vapor entry points into the building. The results of the building evaluation are presented below.

Showroom, Storage Areas, and Garage Areas

According to the Municipality of Anchorage (MOA) Property Information Database, the building on the subject property was constructed in 1968 and 1990. The building consists of a single story throughout most of the building and two stories in the southeastern portion of the building, where an apartment is located on the second floor (Figure 2).

A BGES representative and Katrina Chambon met with Larry Puckett, Store Manager and representative for Six Robblees, Inc., to evaluate the building. An inspection was performed for the entire building with the exception of the attic located adjacent to the show room and the apartment located on the second floor and in the southeastern portion of the building. The inspection included an evaluation of the showroom, offices, parts storage areas, garage areas, a boiler room, and

restrooms, to document the construction and potential vapor entry points into the building. The building was constructed with a concrete slab-on grade foundation and cinder block walls. There were no basement areas identified for this building. Mr. Puckett mentioned that he was not aware of any employees that have complained of chemical smells in the building. Photographs 1 through 9 of the building are included in Appendix A.

There are no air ducts located in the building. Three space heaters are utilized for heat in the building. One of the space heaters is located in the showroom area (Photograph 1 in Appendix A). The other two space heaters are located in the eastern and western garage areas (Photographs 2 and 3 in Appendix A). There are several vents located between the showroom and the attic area over the offices (Photograph 1 in Appendix A). Several indoor/outdoor passive fresh air vents were noted near the roof of the garage portion of the building.

The floors in the showroom were covered with vinyl tiles and the floors in the office areas were covered with carpet. There were no obvious cracks in these floors, however, the presence of tile and carpet prevented a detailed inspection of the underlying concrete. The floors throughout the parts storage areas were concrete and did not show any obvious cracks (Photograph 4 in Appendix A). The floors throughout the eastern and western garage areas were also concrete and the only obvious cracks were located between the eastern garage area and the western garage area and between the eastern garage area and the eastern building wall (Photographs 5 and 6 in Appendix A). The crack between the two garage areas was approximately 1 to 2 inches wide. The crack at the outside eastern wall was also 1 to 2 inches wide. A linear floor drain was present in the western garage area and it reportedly drains to the municipality sanitary sewer (Photograph 7 in Appendix A). A potable well is located outside the southwestern portion of the building (Photograph 8 in Appendix A).

The only potential vapor entry points identified with respect to the building were the floor drain and the cracks through the concrete.

Boiler Room

The boiler room was located on the northwest side of the building and was contained within a separate room that was only accessible from the exterior of the building. Two boilers were contained within the boiler room (Photograph 9 in Appendix A). These boilers previously supplied heat to the building via hot water baseboard heating. This heating system is no longer in use at the subject property. An exhaust manifold from each of the boilers was connected via aluminum ducting and the exhaust was vented to the atmosphere above the roof of the boiler room. There were no floor drains in the boiler room. The floor of the boiler room was concrete and no significant

cracking was noted. There were no potential vapor entry points identified with respect to the boiler room.

A copy of the completed Building Inventory form is included in Appendix B. The potential vapor entry points are presented on Figure 2.

3.0 CONCLUSIONS

Vapor intrusion is the migration of volatile chemicals, such as petroleum hydrocarbons and chlorinated solvents, from contaminated subsurface soils, free-phase liquids, or residual non-aqueous phase liquid above or near the top of the saturated zone, or shallow dissolved-phase contamination in groundwater into overlying or nearby buildings. Contaminants from a vapor source volatilize and migrate into surrounding soil pore spaces as soil gas. Vapors in the subsurface diffuse from areas of high concentration to areas of low concentration. When vapors are near a building, advective forces associated with the building may cause the vapors to flow through potential entry points into the building. The rate at which vapors migrate through soil and into buildings is difficult to quantify and is dependent on numerous variables including, but not limited to, soil type, chemical properties, building design and condition, pressure differentials between the subsurface and the building, and climatic conditions.

The extent of contamination from the USTs appears to be limited in soil and groundwater to the area in the vicinity of the former USTs and the area immediately downgradient from the original source area. Based on the contamination identified at the subject property, the ADEC requested that the potential for vapor intrusion into the building located on site be evaluated. This report documents the initial phase of evaluating the potential vapor intrusion pathway for this property, which consisted of a building evaluation to define potential vapor entry points for the subject property.

As previously discussed above, the foundation of the building is concrete slab-on-grade. As such, no crawl spaces or basements are associated with this building. All passive ventilation ports are located greater than six feet above the ground surface; therefore, they are not considered to be potential vapor entry points. The potential vapor entry points for the subject property include the water (from the potable well) and sewer piping entering through the concrete foundation, the overhead doors for the garage areas, the cracks located between the building foundation and the asphalt parking area on the east side of the building, the crack between the eastern and western garage areas; and any other cracks that may extend completely through the concrete foundation that were not visible during the building inspection.

4.0 RECOMMENDATIONS

BGES recommends that the potential pathway for vapor migration associated with the volatilization of contaminants to indoor air at the subject property be evaluated. To assess whether or not there are any immediate health concerns to the building occupants, it is recommended that indoor air samples be collected in the offices, eastern garage area, and western garage area. In addition, it is recommended that an ambient air sample be collected outside the building as a comparison control sample. The locations of the proposed indoor and outdoor air samples are presented in Figure 3.

5.0 EXCLUSIONS AND CONSIDERATIONS

This report presents facts, observations, and inferences based on conditions observed during the period of our project activities, and only those conditions that were evaluated as part of our scope of work. Our conclusions are based solely on our observations made and work conducted, and only apply to the general vicinity of the subject property that was assessed. In addition, changes to site conditions may have occurred since the completion of our project activities. These changes may be from the actions of man or nature. Changes in regulations may also impact the interpretation of site conditions. BGES will not disclose our findings to any parties other than our client as listed above, except as directed by our client, or as required by law.

The building evaluation, interviews, and report preparation were performed by Jayne Martin, Senior Environmental Scientist with BGES. Ms. Martin has over 20 years of professional environmental consulting experience and has performed and managed hundreds of similar projects in the lower 48 states and in Alaska. She has extensive knowledge and experience with contaminated sites and remediation. This report was reviewed and approved by Robert N. Braunstein, C.P.G., Principal Geologist of BGES. Mr. Braunstein has more than 30 years of geological/environmental consulting experience and has conducted and managed thousands of environmental projects involving site characterization and remediation efforts, throughout Alaska and the lower 48 states.

Prepared By:

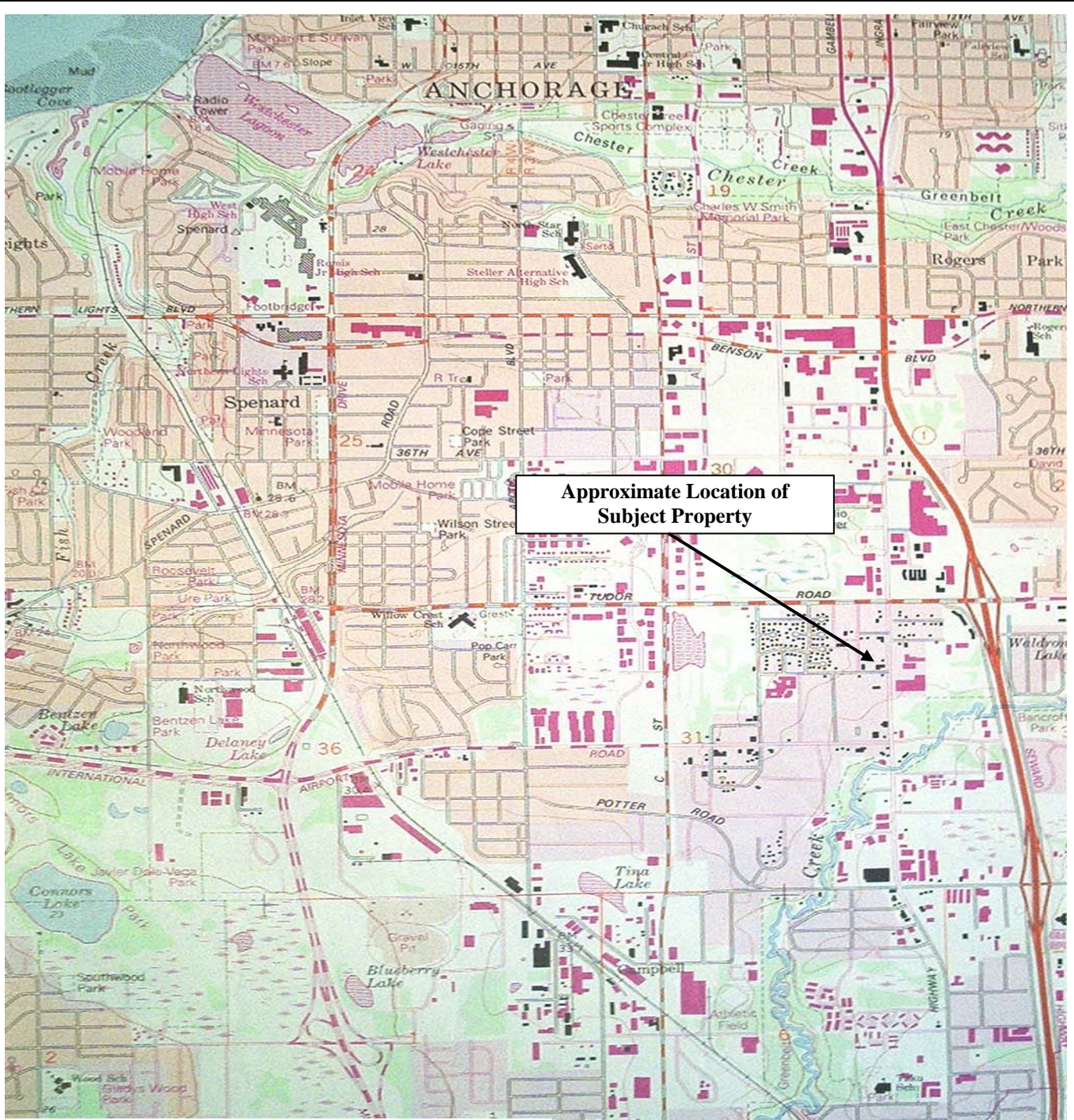


Jayne Martin
Senior Environmental Scientist

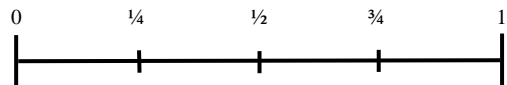
Reviewed and Approved By:



Robert N. Braunstein, C.P.G.
Principal Geologist



Source: USGS Map, Anchorage (A-8) NW, Alaska 1979, Revised 1994.



Approximate Scale in Miles

4748 Old Seward Highway
Anchorage, Alaska
Property Vicinity Map

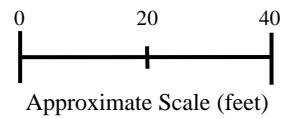
BGES, INC.

May 2013

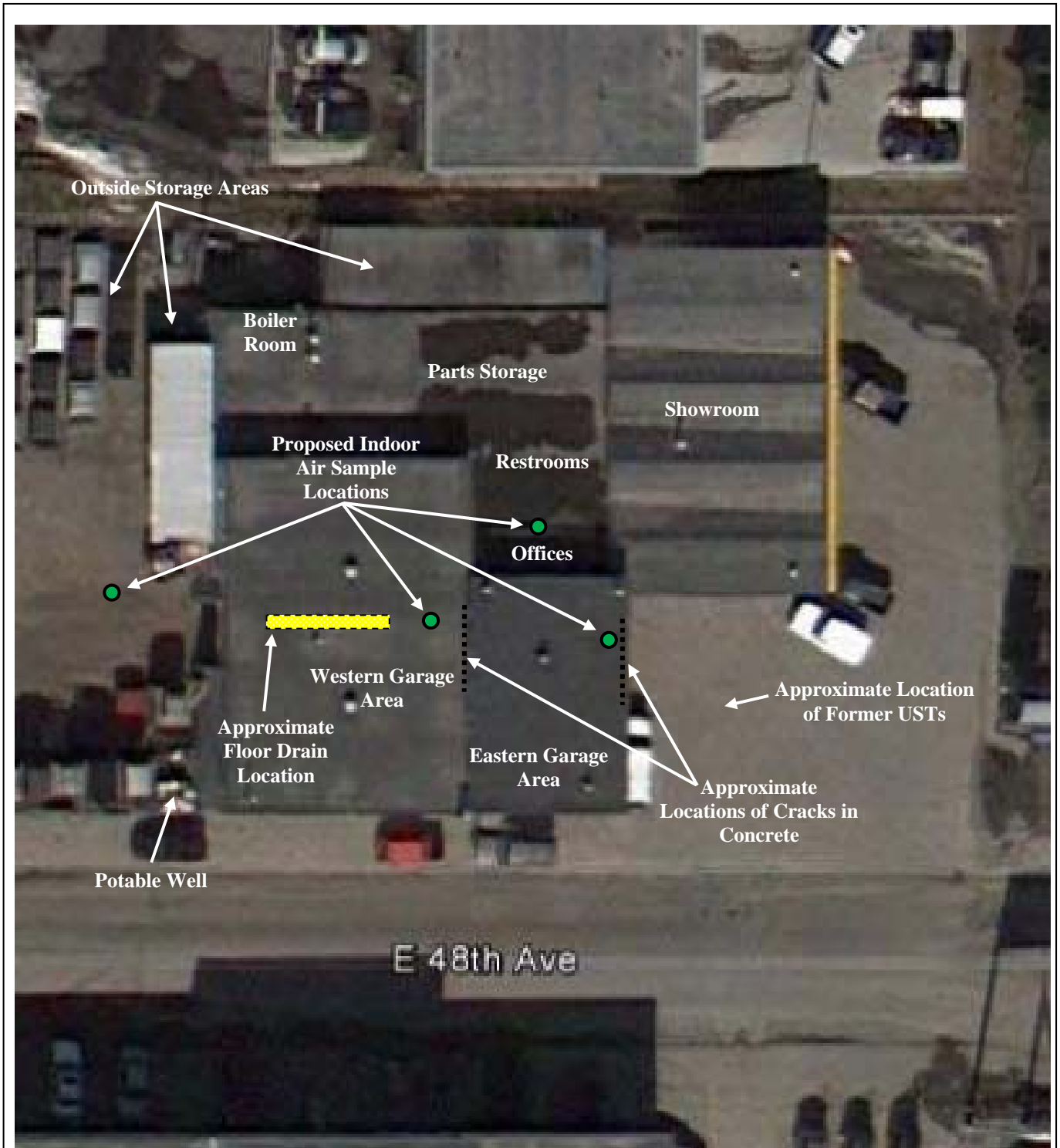
Figure 1



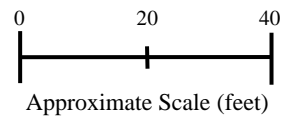
Source: USGS Map, Anchorage (A-8) NW, Alaska 1979, Revised 1994.



4748 Old Seward Highway Anchorage, Alaska Site Location Map		
BGES, INC.	May 2013	Figure 2



Source: USGS Map, Anchorage (A-8) NW, Alaska 1979, Revised 1994.



4748 Old Seward Highway Anchorage, Alaska Proposed Indoor Air Sample Locations		
BGES, INC.	May 2013	Figure 3

APPENDIX A
PHOTOGRAPHS



Photo 1. Heater Located in Showroom



Photo 2. Heater Located in Eastern Portion of Garage



Photo 3. Heater Located in Western Portion of Garage



Photo 4. Floor in Parts Storage Area



Photo 5. Crack in Concrete Between Garage Areas



Photo 6. Crack in Concrete Between Garage and Outside Wall

4748 Old Seward Highway
Anchorage, Alaska
Site Photographs

BGES, INC.

May 2013

Figure C-1



Photo 7. Floor Drain in Western Garage Area



Photo 8. Potable Well Near Southwestern Corner of Building



Photo 9. Boiler Room Near Northwestern Portion of Building. The boiler is no longer in use.

4748 Old Seward Highway
Anchorage, Alaska
Site Photographs

BGES, INC.

May 2013

Figure C-2

APPENDIX B
BUILDING INVENTORY FORM

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or slab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name JAYNE MARTIN Date/Time Prepared 5/10/13

Preparer's Affiliation BGES Phone No. 644-2900

Purpose of Investigation BUILDING EVALUATION

SECTION I: BUILDING INVENTORY

1. OCCUPANT OR BUILDING PERSONNEL:

Interviewed Y / N

Last Name PUCKETT First Name LARRY

Address 4748 OLD SEWARD HWY

City ANCHORAGE, AK 99503

Phone No. (907) 354-2516 cell ; (907) 344-7497 (store)

Number of Occupants/people at this location NOT KNOWN Age of Occupants NOT KNOWN

2. OWNER or LANDLORD: (Check if same as occupant ____.)

Interviewed: Y / N

Last Name ROBBLEE First Name ANDY

Address 11010 TUKWILA INTERNATIONAL ROAD

City SEATTLE, WA 98168

Phone No. _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response.)

- | | | |
|-------------|--------|-----------------------------|
| Residential | School | <u>Commercial</u> Multi-use |
| Industrial | Church | Other _____ |

If the property is residential, what type? (Circle appropriate response.) Multi-family

Ranch
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouse/Condo
Other

AN APARTMENT WAS PRESENT IN THE
SOUTHEASTERN PORTION OF THE BUILDING.

If multiple units, how many? NA

If the property is commercial, what type?

Business types(s) SALE OF TRUCK ACCESSORIES

Does it include residences (i.e., multi-use)? Y N

If yes, how many? SINGLE APT. ON SECOND FLOOR IN
SOUTHEAST PORTION OF BLDG.

Other characteristics:

Number of floors 1 FLOOR EXCEPT FOR
APT. ON SECOND STORY
IN SOUTHEAST
PART OF BLDG.

Building age 1968 & 1990 (45 & 23 years)

Is the building insulated? Y N

How airtight? Tight / Average / Not Tight

Have occupants noticed chemical odors in the building?

Y N

If yes, please describe:

4. AIRFLOW

Use air current tubes, tracer smoke, or knowledge about the building to evaluate airflow patterns and qualitatively describe:

Airflow between floors

1ST FLOOR & ATTIC - MOVEMENT BETWEEN SHOWROOM & ATTIC
1ST FLOOR & APT. - THROUGH STAIRWELL, NOT INTERCONNECTED
WITH AIR DUCTS

Airflow in building near suspected source

OPEN SPACE WITH HEATER SUSPENDED FROM CEILING
(HEATER IS FUELED BY NATURAL GAS)
SLAB-ON GRADE CONSTRUCTION - NO CRAWL SPACE
HIGH CEILING

Outdoor air infiltration

VENTS FROM NEAR CEILING INTO BUILDING FROM OUTSIDE

Infiltration into air ducts

NO AIR DUCTS PRESENT

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply.)

SOME NO FIRE RESISTANT

- a. Above-grade construction: wood frame log concrete blocks brick
 constructed on pilings with enclosed air space constructed on pilings with open air space
- b. Basement type: NA full crawlspace slab-on-grade other _____
- c. Basement floor: NA concrete dirt stone other _____
- d. Basement floor: NA unsealed sealed sealed with _____
- e. Foundation walls: NA poured block stone other _____
- f. Foundation walls: NA unsealed sealed sealed with _____
- g. The basement is: NA wet damp dry
- h. The basement is: NA finished unfinished partially finished
- i. Sump present? Y (N)
- j. Water in sump? Y / N / not applicable

Basement or lowest level depth below grade SLAB-ON GRADE (feet).

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, and drains).

CRACK BETWEEN EAST & WEST GARAGE AREAS (~ 1 to 2 inches wide)
CRACK BETWEEN EAST GARAGE AREA AND ASPHALT PARKING LOT
(APPROX. 1 to 2 inches wide)

6. HEATING, VENTING, and AIR CONDITIONING (Circle all that apply.)

Type of heating system(s) used in this building: (Circle all that apply – not just primary.)

- Hot air circulation Heat pump PREVIOUSLY USED BOILER NO LONGER USED
- Space heaters Stream radiation Hot water baseboard
- Electric baseboard Wood stove Radiant floor
- NATURAL GAS OPERATED Outdoor wood boiler Other _____

The primary type of fuel used is:

- Natural gas Fuel oil Kerosene
- Electric Propane Solar
- Wood Coal

Domestic hot water tank is fueled by: NATURAL GAS NOT KNOWN

Boiler/furnace is located in: Basement Outdoors Main floor Other SEPARATE ROOM AT NW BLDE CORNER

Do any of the heating appliances have cold-air intakes? Y (N)

- Type of air conditioning or ventilation used in this building:
- Central air Window units DOORS None
 - Commercial HVAC Heat-recovery system Open windows Passive air system

Are there air distribution ducts present? Y (N)
THERE ARE VENTS BETWEEN THE ATTIC OVER THE OFFICES AND THE SHOW ROOM.
 I-3

Describe the ventilation system in the building, its condition where visible, and the tightness of duct joints. Indicate the location of air supply and exhaust points on the floor plan.

~~ON NA~~ THERE IS NOT A VENTILATION SYSTEM IN THE BUILDING. THERE ARE SPACE HEATERS AND FRESH AIR VENTS SCATTERED THROUGHOUT BUILDING NEAR CEILINGS. DURING ~~THE~~ MANY DAYS - THE GARAGE DOORS ARE OPENED FOR VENTILATION.

Is there a radon mitigation system for the building/structure? Y / N Date of Installation _____

Is the system active or passive? NA Active/Passive

7. OCCUPANCY

Is basement/lowest level occupied? NA Full-time Occasionally Seldom Almost never

Level General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).

Basement NA
 1st Floor SHOW ROOM, OFFICES, WAITING AREA, GARAGE & WORK AREAS
 2nd Floor APARTMENT (KITCHEN, BEDROOM & FAMILY ROOM)
 3rd Floor NA

8. WATER AND SEWAGE

Water supply: Public water Drilled well Driven well Dug well Other PURCHASES DRINKING WATER FOR EMPLOYEES

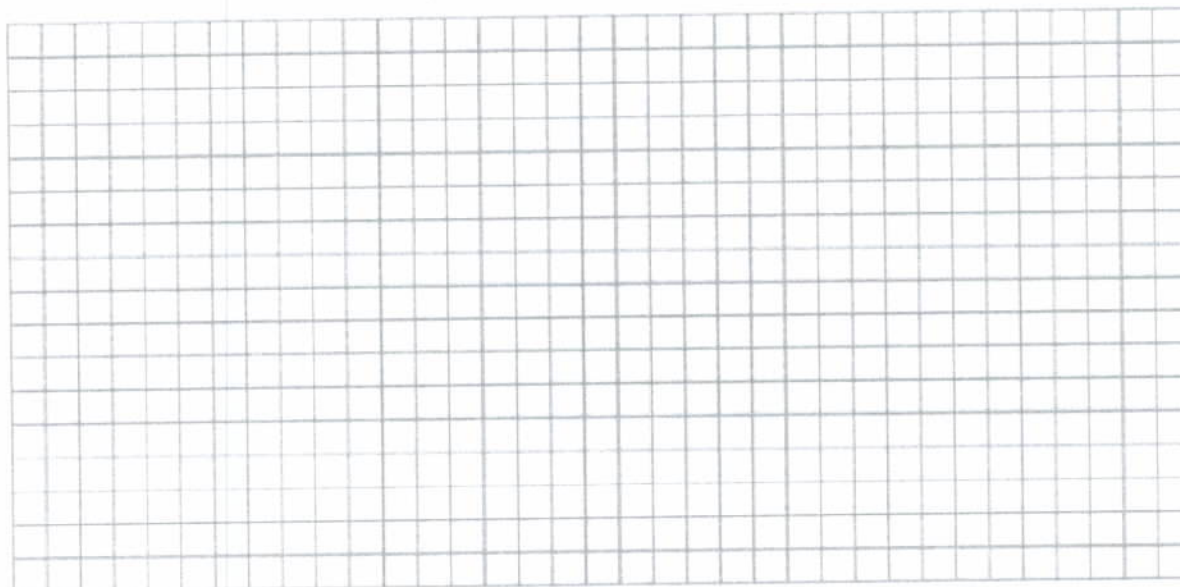
Sewage disposal: Public sewer Septic tank Leach field Dry well Other _____

LOCATED SW OF BLDG.

9. FLOOR PLANS *No PID readings were collected*

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement: *NA*



First Floor: *(SEE AERIAL PHOTO)*

ATTACHED

*No odors were noted inside or outside
the building.*

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

NOT APPLICABLE DURING BLDG. SURVEY

4 DRAWN
2 TO BRACKETS
OF PHASE
WATER



POTABLE
WELL

FLOOR
DRAIN

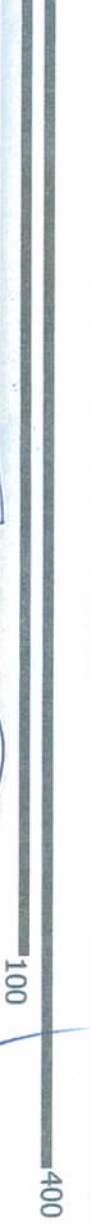
NATURAL
GAS
METER

E 48th Ave



Google earth

feet
meters



Google earth

SITE EVALUATION 5/10/13