

**Environmental Evaluation of Property  
Summit Prototype Homesite  
Buckland, Alaska**

July 2012

Submitted To:  
**Alaska Department of Environmental Conservation**  
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Anchorage, Alaska 99501

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32-1-17517

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**ACRONYMS AND ABBREVIATIONS**

ACMs	Asbestos-Containing Materials
ADEC	Alaska Department of Environmental Conservation
ASTs	Aboveground Storage Tanks
CCHRC	Cold Climate Housing Research Center
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CORRACTS	TSD Facilities Subject to Corrective Action
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
HUD	Housing and Urban Development
LUST	Leaking Underground Storage Tank
mg/kg	Milligrams per kilogram
NONCORRACTS	TSD Facilities Not Subject to Corrective Action
NPL	National Priorities List
NTP	Notice to Proceed
RCRA	Resource Conservation and Recovery Act
TSD	Treatment, Storage, and Disposal
UST	Underground Storage Tank

**ENVIRONMENTAL ASSESSMENT OF PROPERTY  
SUMMIT PROTOTYPE HOMESITE  
BUCKLAND, ALASKA**

**1.0 INTRODUCTION**

This report documents the results of our Environmental Assessment at the Summit Prototype Homesite in Buckland, Alaska (the Property). The Property is located on Lot 1, Block 1, Hillside Boulevard Subdivision in Buckland, Alaska.

**1.1 Purpose**

The project purpose is to conduct an environmental evaluation of the Property and adjacent parcels and form a professional opinion whether contamination from a nearby tank farm will significantly impact the construction of a proposed prototype home. We understand the Cold Climate Housing Research Center (CCHRC) plans to develop the Property for a new energy-efficient pilot housing project, but first desires to document the potential for contamination that could impact this intended land use. The primary source of concern is an adjacent former fuel storage area/tank farm.

The CCHRC project is funded in part by the U.S. Department of Housing and Urban Development (HUD). HUD has also asked that environmental conditions be clarified before proceeding with the construction.

**1.2 Terms and Conditions**

The environmental assessment was prepared for the Alaska Department of Environmental Conservation (ADEC). The project was administered under ADEC Term Contract 18-4002-12, Notice to Proceed (NTP) No. 49. Authorization to proceed with the project was received from Mr. Dennis Harwood on July 11, 2012. The project was performed in material accordance with Shannon & Wilson, Inc.'s (Shannon & Wilson) July 3, 2012 proposal *Proposed Scope of Services, Environmental Evaluation of Propoerty, Summit Prototype Homesite, Buckland, Alaska*.

**1.3 Scope Overview**

The project consisted of an aerial photograph review, a regulatory database review, a site visit, and interview. Additional ADEC supplied information was also reviewed for this project.

## 2.0 SITE AND PROJECT DESCRIPTION

### 2.1 Location and Legal Description

The Property is located on Lot 1, Block 1, Hillside Boulevard Subdivision in Buckland, Alaska. A Vicinity Map showing the Property and surrounding area is included as Figure 1. Figure 2 is a site plan depicting the site features of the Property and adjacent parcels.

### 2.2 Site and Vicinity Characteristics

The Property is located in a community infrastructure/residential area in Buckland and encompasses 9,462 square feet. The Property is undeveloped and vegetated with tall grasses and tundra mat. The Property is bordered to the north and northeast by the Old and New Tank Farms, respectively. An access road extends along the eastern side of the property, and a building identified by the mayor as the Summit Camp Building is located adjacent to the south. The area to the west of the property is vegetated.

### 2.3 Past and Current Use of Property

The Property is undeveloped and vegetated. It does not appear - based on interviews and aerial photograph review - that this property has been previously developed or otherwise improved. The only indication of past use was vehicle paths evident in aerial photographs from 1986 and 1996. This path was not observed in the 2010 aerial photo or during the July 18, 2012 site visit.

### 2.4 Environmental Assessments Conducted on the Property

According to ADEC records, no environmental assessments have been recorded for the Property.

### 2.5 Past and Current Uses of Adjoining Properties

Based on our aerial photograph review (see Section 3.1), the current use of the adjoining parcels is consistent with historical uses. The parcel to the north of the Property is currently used as a tank farm and vehicle storage area. This parcel is referred to as the Old Tank Farm. Parcels to the east of the Property, east of the access road, are currently used for village maintenance and storage. Based on aerial photograph review, it appears that these buildings were constructed after the old airport was abandoned and converted to the main street of the village. The exact building dates and date of airport conversion were not determined. The parcel to the south of the Property was undeveloped until the current building (known as the Summit Camp) was

constructed. Based on aerial photograph review the Summit Camp was built between 1996 and 2010.

### 3.0 RECORDS REVIEW

The purpose of the records review was to identify previous activities that may have constituted environmental misuse and/or contributed to the presence of waste residuals at the Property. This review consisted of aerial photograph review and a regulatory database search.

#### 3.1 Aerial Photographs

Aerial photographs from Aero-Metric USA, Inc. were reviewed to evaluate prior land use in this area. The photos that are included in this report are from 1996 and 2010. These photos are included as Figures 3 and 2, respectively, and are each enlarged to an approximate scale of 1 inch equals 100 feet. Although not chosen to print, an aerial photographs from 1972, 1984, 1986, and 1990 were also reviewed. The approximate Property boundary is shown in red on the figures for reference.

In the June 21, 1972 aerial photograph the Property is undeveloped. The Old Airport Runway is visible to the north of the Property and there are several buildings located along the northern side of the runway.

In the August 29, 1984 aerial photograph, the area looks similar to the 1972 aerial photograph. The Property remains undeveloped but an additional building has been added on the southern side of the Old Airport Runway.

In the June 14, 1986 aerial photograph the Old Airport Runway is being converted to the main road for the village of Buckland. The Property remains undeveloped but to the north, it appears land clearing is taking place, likely in preparation for construction of the Old Tank Farm. A vehicle path extends from the access road to the east of the Property and transects the Property heading southwest.

The August 3, 1990 aerial photograph shows the Old Tank Farm without the vehicle storage area that is present today. The Property remains undeveloped. The vehicle path observed in the 1986 photo is still visible transecting the Property. The Old Airport Runway has been converted to the main road of Buckland. Two buildings are present to the east of the Old Tank Farm.

The June 13, 1996 aerial photograph is included as Figure 3. The Property remains undeveloped and vegetated. The transecting vehicle path is still visible across the Property, but appears to now contain water. The Old Tank Farm is present with a total of 11 aboveground storage tanks (ASTs) visible in the aerial photograph. It appears that fencing is present around the tank farm and a structure to the east of the Old Tank Farm in the cleared area that is used for vehicle parking and storage at the time of the site visit in 2012.

The September 21, 2010 aerial photograph is included as Figure 2 and is the next most recent photograph after the 1996 aerial. The Property appears much as it did during the July 18, 2012 site visit. A piece of plywood was observed in the central portion of the Property during the July 2012 site visit, and it appears that this piece of plywood is present in the 2010 aerial photograph. The vehicle path is no longer visible on the Property. Additional development has occurred to the north. The vehicle parking/storage area at the Old Tank Farm appears as it did during the July 18, 2012 site visit. The structure observed in this area in the 1996 photo is not evident in the 2010 photo. Additional stored materials are visible in the southeastern corner of the Old Tank Farm. Further north, an access road has been constructed and extends to the New Tank Farm which was constructed to the west of the Old Tank Farm. The New Tank Farm appears to contain approximately 19 ASTs which are segregated into three containment units. The Summit Camp is present to the south of the Property and the Buckland Clinic is visible to the southeast of the Property across the access road. Additional development has been conducted to the east of the Property, east of the access road and one additional building is present to the northeast of the Property east of the access road.

### **3.2 Regulatory Database Search**

Federal and state database records were researched on June 19, 2012 for pertinent information regarding the environmental condition of the Property and adjacent parcels.

#### **3.2.1 Federal Records Sources**

The National Priorities List (NPL) specifies those properties assigned the Environmental Protection Agency's (EPA) highest cleanup priority. The EPA website was reviewed for active NPL sites in Alaska. There are no listed NPL sites in the Buckland area.

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is also compiled by the EPA and includes sites the EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on



the NPL. According to the CERCLIS list, there are no CERCLIS sites located in the Buckland area.

According to the EPA Region 10 report, there are no Resource Conservation and Recovery Act (RCRA) treatment, storage, or disposal (TSD) facilities subject to corrective action (CORRACTS) within 1 mile of the Property. TSD facilities not subject to corrective action (NONCORRACTS) are not located within 0.5 mile of the Property. There are no listed hazardous materials TSD facilities within 0.5 mile of the Property.

The Emergency Response Notification System (ERNS) lists reported hazardous substance releases in quantities greater than the reportable quantity. The Property is not on the ERNS list.

The Brownfield list does not contain EPA Brownfield Assessment, Cleanup, and Revolving Loan Fund Grantees in the Buckland area.

### **3.2.2 State Records Sources**

The ADEC Spills List was reviewed for information regarding spills on the Property. No spills were listed on the ADEC Spills List for the Property. A release at the Old Tank Farm is listed on the Spills List. According to the database, 7,750 gallons of diesel were released at the Old Tank Farm on April 5, 2008. The database states that the approximately 3,100 gallons of diesel fuel were recovered and that the case was “closed” by ADEC Spills on August 24, 2009 and transferred to ADEC’s contaminated sites division.

#### Registered Underground Storage Tank Database

The ADEC registered underground storage tank (UST) records, available on the ADEC website, were viewed on July 22, 2012. The ADEC records indicate that the Property is not listed as a UST site. No other USTs were identified in Buckland.

#### Leaking Underground Storage Tank Database

The ADEC’s Leaking Underground Storage Tank (LUST) database was reviewed on July 22, 2012, for information regarding LUST sites on or adjacent to the Property. No LUST sites were identified in Buckland.

Contaminated Sites Database

The ADEC Contaminated Sites database was reviewed on July 22, 2012, for sites adjacent to the Property. The Property is not listed as a contaminated site on the ADEC database.

The closest contaminated site is located north of the Property at the Old Tank Farm (identified as the Buckland IRA Fuel Depot on the database). The following is a synopsis of the information available on the ADEC Contaminated Sites Database. Based on our experience, however, it is unlikely the documented release at this site will impact the proposed Property improvements, considering the distance to the Property and typical release, fate, and transport mechanisms.

Site reconnaissance efforts conducted in 2001 at the Old Tank Farm identified a sheen near the dispenser shed. Soil samples collected from the tank farm contained a maximum diesel range organics (DRO) result of 4,170 milligrams per kilogram (mg/kg). No additional information regarding follow up activities to the 2001 site reconnaissance efforts are provided.

A new release was identified at the Old Tank Farm on April 5, 2008. According to information provided in the database, approximately 7,500 gallons of diesel fuel spill occurred at the tank farm. The cause of the release was a split fueling pipe that connected to the pump shed, approximately 200 feet north of the Property. The spill response efforts included using heavy equipment and hand tools to segregate clean snow from contaminated snow and removing 306 cubic yards of contaminated snow and 150 cubic yards of clean snow from the impacted area. A transfer pump was also used to recover fuel that had accumulated under the ice. The snow was melted and treated with an on-site treatment system before it was discharged into the waste water treatment lagoon. During the response, almost 27,000 gallons of melted snow were treated and discharged to the lagoon and 3,100 gallons of diesel were recovered. The recovered fuel was recycled for heating purposes in the village. A total of 558 cubic feet of contaminated vegetation were burned in Smart Ash Burners. In addition, twelve super sacks of contaminated soil were shipped to Washington State for disposal. Earthen dikes were constructed around the impacted area and sorbent booms were deployed to assist in containing fuel sheens and fuel that may become mobile in the area during annual spring flooding. During the floods ADEC stayed in daily contact with the village responders and they reported that no sheens were visible in the spill area. According to the information provided on the ADEC database, this site remains open.

## 4.0 SITE RECONNAISSANCE

A Shannon & Wilson representative (Ms. Jessica Busey), accompanied by Mr. Tim Gavin, Buckland Village Mayor, visited the Property on July 18, 2012 to observe the Property and neighboring parcels. Photographs taken during site reconnaissance activities are included in Appendix A. Video taken during the site visit is included as an electronic deliverable separate from this report.

### 4.1 Property Grounds Evaluation

The Property is undeveloped and vegetated with grass and tundra mat, as shown in Photos 1, 2, and 3. Mr. Gavin stated that the property has never been developed that he is aware of. The ground surface was soft and wet, with ponded water visible in at least one location. No hydrocarbon sheen or odor was observed on the ponded water. No signs of distressed vegetation were observed along the portions of the Property bordering the neighboring tank farm. A piece of plywood was observed in the central portion of the Property (visible in the 2010 aerial photograph included as Figure 2). The Property is bordered by the Old Tank farm to the north (Photo 3), an access road to the east with several buildings associated with village maintenance and the Buckland Medical Clinic further east, the Summit Camp site to the south, vegetated tundra to the west, and the New Tank Farm to the northeast (Photo 2).

### 4.2 Surrounding Properties Evaluation

The parcel north of the Property is the site of the Old Tank Farm which reportedly had a release in 2008. Mr. Gavin indicated that the release was due to a leak in the piping which fed the tank farm. The release location indicated by Mr. Gavin was to the northeast of the Old Tank Farm, as shown on Figure 2. The release occurred in a low lying area while there was still snow on the ground. At the time of our site visit, ponded water was present in the area of the release, as shown in Photo 4. A sorbent boom was placed at the edge of the ponded water on the north side of the northern fence boundary of the Old Tank farm (Photo 4). Mr. Gavin indicated that this was placed as a precautionary measure each year.

The Old Tank Farm parcel includes a vehicle parking/storage area to the east and a bermed tank farm to the west (see Figure 2 aerial photograph). The Old Tank Farm contains 12 ASTs, 11 of which are reported to be empty. The southeastern tank, indicated on Figure 2, is reportedly currently in use. Signs of surface stains were observed in the central portion of the Old Tank Farm and faint hydrocarbon odors were also noted. Ponded water was observed in the southwest

corner of the Old Tank Farm (Photo 5). No hydrocarbon odor or sheen were noted on or in the vicinity of the ponded water. The berm of the tank farm was observed and appeared to be continuous around the Old Tank Farm tanks. A black liner was evident in both the southern and northern berms (Photos 6 and 7).

Numerous drums were stored in the southeast portion of the Old Tank Farm within the berms (Photo 8). Most of the drums appeared to be empty; however, several drums labeled as either fuel or lubricant still contained liquid (Photo 9). No leaking or damaged drums were observed at the time of our site visit.

A gravel access road extends along the north site of the Old Tank farm to the New Tank Farm as shown in Figure 2. Mr. Gavin indicated that the low lying spill area had been excavated during cleanup activities and that was part of the reason that this area was lower than the surrounding area (Photo 10). As shown in Figure 2, fuel lines are visible crossing this area and Mr. Gavin indicated that one of these lines was the source of the release.

The New Tank Farm is located approximately 200 feet northwest of the Property and around 120 feet west of the Old Tank Farm (Photos 11 and 12). An old road is visible extending from the Old Tank Farm to the New Tank Farm (Photo 12). The New Tank Farm contains tanks for three different entities according to Mr. Gavin; the IRA Fuel Project, the City of Buckland, and the school. No surface staining or odors were observed in the New Tank Farm at the time of the site visit.

### **4.3 Hazardous Substances and Petroleum Products**

No containers of potentially hazardous substances or petroleum products were observed at the Property. Petroleum products were identified at both the Old Tank Farm and New Tank Farm. In addition numerous drums were observed at the Old Tank Farm and are further discussed in Section 4.5.

### **4.4 Storage Tanks**

Storage tanks were not observed on the Property during the July 18, 2012 site visit. There are two tank farms with numerous storage tanks located to the north and northwest of the Property.

#### **4.5 Drums**

No 55-gallon drums were observed on the Property during the July 18, 2012 site visit. Numerous drums were observed within the containment berm of the Old Tank Farm. The drums were primarily empty, but several labeled as lubricant or fuel were observed at the Old Tank Farm.

#### **4.6 Asbestos-Containing Materials**

No building was present on the Property; therefore, potential asbestos containing materials (ACMs) are not anticipated at the Property. We did not conduct tests to determine whether ACMs and/or lead-based paint are present on the Property or surrounding parcels.

#### **4.7 Polychlorinated Biphenyls**

No transformers were observed on or near the Property. It is noted that the electric utility is typically responsible for releases from their transformers or equipment.

#### **4.8 Solid Waste Disposal**

Based on our visual observations, the Property was not used for disposal of construction debris, demolition debris, or other solid waste.

### **5.0 INTERVIEWS**

Mr. Gavin was interviewed during the July 18, 2012 site visit. Mr. Gavin's interview was supplemented with information provided by Mr. Cory DeRutigliano of CCHRC. Mr. Gavin is the Mayor of Buckland and was also involved in the spill cleanup activities in 2008. Portions of Mr. Gavin's interview are incorporated throughout this report, in particular into the Site Reconnaissance section of this report (Section 4.0). Mr. Gavin confirmed the general details of the spill response activities represented in the ADEC contaminated site file for the Old Tank Farm, as described in Section 3.2.2. Mr. Gavin indicated that he was unaware of previous on-site environmental concerns at the Property. Mr. Gavin indicated that the plan for the Summit Prototype Homesite was to place around 4-5 feet of fill material on the ground surface of the Property prior to building the Homesite structure. This information was confirmed by Mr. DeRutigliano. Mr. Gavin and Mr. DeRutigliano indicated that no excavation activities are planned for the Property.

## 6.0 FINDINGS AND CONCLUSIONS

We have performed an Environmental Assessment of the Property identified as Lot 1, Block 1, Hillside Boulevard Subdivision (the Summit Prototype Homesite) in Buckland, Alaska. The Property was vegetated and undeveloped at the time of our site visit. No environmental conditions were identified at the Property. The primary area of interest for the entities involved in the Summit Prototype Homesite Project is the area of the reported release at the Old Tank Farm. Visual and olfactory observations did not indicate obvious signs of contamination at the spill location, or that contamination had migrated from that location to the Property.

## 7.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

This Environmental Assessment was prepared by Ms. Jessica Busey under the supervision of Mr. Matt Hemry, P.E. Ms. Busey, a Senior Environmental Scientist, received a B.S. in Environmental Science from Middle Tennessee State University in 2002. Mr. Hemry, Vice President, received a B.S. in Engineering Sciences from Dartmouth College in 1990 and a M.S. in Environmental Engineering from Duke University in 1992. These individuals have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property, and they have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Shannon & Wilson declares that, to the best of our professional knowledge and belief, Ms. Busey and Mr. Hemry meet the definition of “Environmental Professional” as defined in 40 CFR 312.10.

## 8.0 CLOSURE/LIMITATIONS

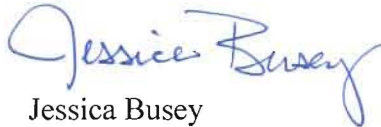
This report is an instrument of service prepared by Shannon & Wilson for the exclusive use of ADEC, herein referred to as the Client, and its affiliates. This report was prepared for the exclusive use of the Client for evaluating the Property as it relates to the environmental aspects discussed herein. The conclusions contained in this report are based on information provided from the observed site conditions, personal interviews, and other sources identified herein, and further assume that the conditions observed are representative of the conditions throughout the Property. The data presented in this report should be considered representative of the time of our site assessment. Changes due to natural processes or human activity can occur over time. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations applicable to this Property may need to be revised.

Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information derived from electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report, please contact the undersigned.

Shannon & Wilson has prepared the attachments in Appendix B, "Important Information About Your Environmental Site Assessment/Evaluation Report," to assist you and others in understanding the use and limitations of our report.

We appreciate this opportunity to be of service. Please contact Mr. Matt Hemry, P.E. or the undersigned at (907) 561-2120 with questions or comments concerning the contents of this report.

SHANNON & WILSON, INC.

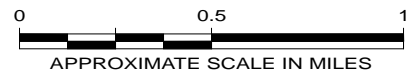
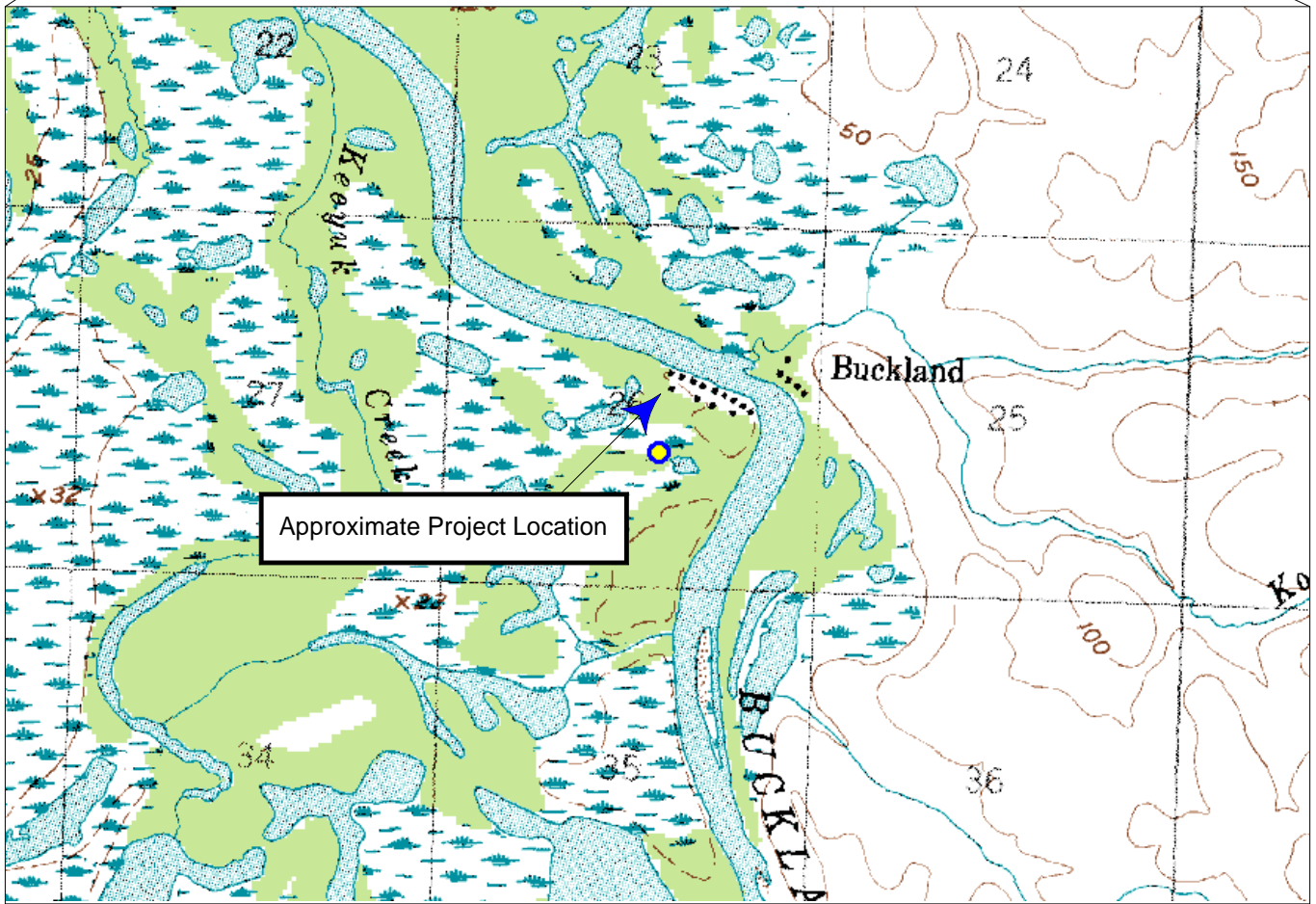
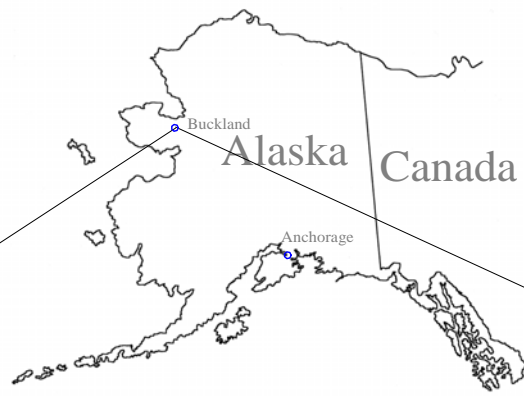


Jessica Busey  
Sr. Environmental Scientist




Matt Hemry, P.E.  
Vice President

JEB/msh



Elevation in Feet  
 Contour Interval 50 Feet  
 Taken from Candle D-5  
 (1951)



Summit Prototype Homesite Buckland, Alaska	
<b>Vicinity Map</b>	
July 2012	32-1-17517
 <b>SHANNON &amp; WILSON, INC.</b> Geotechnical & Environmental Consultants	
<b>Fig. 1</b>	





Approximate  
Location of  
Release

Old Tank  
Farm

AST  
Currently  
in Use

Drum  
Storage  
Area

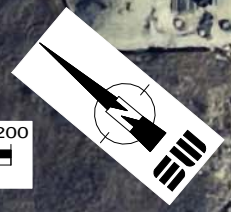
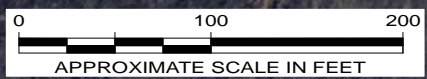
New Tank Farm

Plywood observed  
during July 18, 2012  
site visit

Approximate  
Location of  
Property

Summit Camp

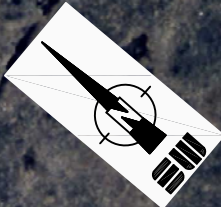
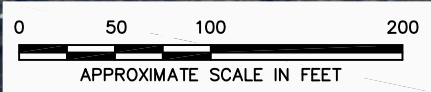
Buckland  
Clinic




Summit Prototype Homesite Buckland, Alaska		
<b>SITE PLAN</b> (Aerial Photograph Dated September July 2012                      21, 2010)                      32-1-17517		
	SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	<b>Fig. 2</b>



Approximate Property Location



SUMMIT PROTOTYPE HOMESITE BUCKLAND, ALASKA	
AERIAL PHOTOGRAPH JUNE 13, 1996	
JULY 2012	32-I-17517
 SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	FIG. 3

**APPENDIX A**  
**SITE PHOTOGRAPHS**



Photo 1: Looking west, the Property is vegetated with grasses and tundra mat. Fill material for the Summit Camp building parcel is present on the left hand side of the photo. (July 18, 2012)



Photo 2: Looking northwest across the Property to the New Tank Farm. (July 18, 2012)

Summit Prototype Homesite  
Buckland, Alaska

**PHOTOS 1 AND 2**

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Photo 3: Looking north across the Property to the Old Tank Farm. The portion of the vehicle storage area is visible on the right hand side of the photo. (July 18, 2012)



Photo 4: Looking north from the Old Tank Farm to the low lying area where the spill occurred. A sorbent boom is visible in the foreground of the photo. (July 18, 2012)

Summit Prototype Homesite  
Buckland, Alaska

**PHOTOS 3 AND 4**

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Photo 5: Looking west, ponded water was observed within the bermed area of the Old Tank Farm. No hydrocarbon odor or sheen was observed at the time of our site visit. (July 18, 2012)



Photo 6: Looking west along the southern fence of the Old Tank Farm. Black liner was observed along the top of the southern berm. (July 18, 2012)

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Buckland, Alaska

**PHOTOS 5 AND 6**

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Photo 7: Looking west along the northern fence of the Old Tank Farm. Black liner was observed along the northern berm of the Old Tank Farm. (July 18, 2012)



Photo 8: Looking east toward the AST still in use at the Old Tank Farm. Numerous empty drums are stored within the bermed portion of the Old Tank Farm. (July 18, 2012)

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Buckland, Alaska

**PHOTOS 7 AND 8**

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Photo 9: Looking north, numerous drums were stored within the Old Tank Farm berms. Some of the drums stored upright in the background contained liquid. (July 18, 2012)



Photo 10: Looking west across the low lying area in the foreground toward the New Tank Farm in the background. The low lying area was reportedly excavated during cleanup activities. (July 18, 2012)

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Buckland, Alaska

**PHOTOS 9 AND 10**

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Photo 11: Looking southeast toward the Property from the New Tank Farm. The Summit Camp Building (blue) is present in the upper right hand corner of the photo. (July 18, 2012)



Photo 12: Looking east from the New Tank Farm to the Old Tank Farm. A former road is evident extending from the Old Tank farm toward the bottom left hand corner of the photo. (July 18, 2012)

Summit Prototype Homesite  
Buckland, Alaska

**PHOTOS 11 AND 12**

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**APPENDIX B**  
**IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE**  
**ASSESSMENT/EVALUATION REPORT**



Date: July 2012  
To: Alaska Department of Environmental Conservation  
Re: Site Assessment, Summit Prototype Homesite,  
Buckland, Alaska

## **Important Information About Your Environmental Site Assessment/Evaluation Report**

### **ENVIRONMENTAL SITE ASSESSMENTS/EVALUATIONS ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.**

This report was prepared to meet the needs you specified with respect to your specific site and your risk management preferences. Unless indicated otherwise, we prepared your report expressly for you and for the purposes you indicated. No one other than you should use this report for any purpose without first conferring with us. No one is authorized to use this report for any purpose other than that originally contemplated without our prior written consent.

The findings and conclusions documented in this site assessment/evaluation have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in this area. The conclusions presented are based on interpretation of information currently available to us and are made within the operational scope, budget, and schedule constraints of this project. No warranty, express or implied, is made.

### **OUR REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.**

Our environmental site assessment is based on several factors and may include (but not be limited to): reviewing public documents to chronicle site ownership for the past 30, 40, or more years; investigating the site's regulatory history to learn about permits granted or citations issued; determining prior uses of the site and those adjacent to it; reviewing available topographic and real estate maps, historical aerial photos, geologic information, and hydrologic data; reviewing readily available published information about surface and subsurface conditions; reviewing federal and state lists of known and potentially contaminated sites; evaluating the potential for naturally occurring hazards; and interviewing public officials, owners/operators, and/or adjacent owners with respect to local concerns and environmental conditions.

Except as noted within the text of the report, no sampling or quantitative laboratory testing was performed by us as part of this site assessment. Where such analyses were conducted by an outside laboratory, Shannon & Wilson relied upon the data provided and did not conduct an independent evaluation regarding the reliability of the data.

### **CONDITIONS CAN CHANGE.**

Site conditions, both surface and subsurface, may be affected as a result of natural processes or human influence. An environmental site assessment/evaluation is based on conditions that existed at the time of the evaluation. Because so many aspects of a historical review rely on third party information, most consultants will refuse to certify (warrant) that a site is free of contaminants, as it is impossible to know with absolute certainty if such a condition exists. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas that showed no signs of contamination at the time they were studied.

Unless your consultant indicates otherwise, your report should not be construed to represent geotechnical subsurface conditions at or adjacent to the site and does not provide sufficient information for construction-related activities. Your report also should not be used following floods, earthquakes, or other acts of nature; if the size or configuration of the site is altered; if the location of the site is modified; or if there is a change of ownership and/or use of the property.

## **INCIDENTAL DAMAGE MAY OCCUR DURING SAMPLING ACTIVITIES.**

Incidental damage to a facility may occur during sampling activities. Asbestos and lead-based paint sampling often require destructive sampling of pipe insulation, floor tile, walls, doors, ceiling tile, roofing, and other building materials. Shannon & Wilson does not provide for paint repair. Limited repair of asbestos sample locations are provided. However, Shannon & Wilson neither warranties repairs made by our field personnel, nor are we held liable for injuries or damages as a result of those repairs. If you desire a specific form of repair, such as those provided by a licensed roofing contractor, you need to request the specific repair at the time of the proposal. The owner is responsible for repair methods that are not specified in the proposal.

## **READ RESPONSIBILITY CLAUSES CAREFULLY.**

Environmental site assessments/evaluations are less exact than other design disciplines because they are based extensively on judgment and opinion, and there may not have been any (or very limited) investigation of actual subsurface conditions. Wholly unwarranted claims have been lodged against consultants. To limit this exposure, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses may appear in this report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

Consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed, or conditions at the site have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of the final assessment/evaluation.

An assessment/evaluation of a site helps reduce your risk, but does not eliminate it. Even the most rigorous professional assessment may fail to identify all existing conditions.

## **ONE OF THE OBLIGATIONS OF YOUR CONSULTANT IS TO PROTECT THE SAFETY, HEALTH, PROPERTY, AND WELFARE OF THE PUBLIC.**

If our environmental site assessment/evaluation discloses the existence of conditions that may endanger the safety, health, property, or welfare of the public, we may be obligated under rules of professional conduct, statutory law, or common law to notify you and others of these conditions.

The preceding paragraphs are based on information provided by the  
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland