

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**5871 CHURCHILL WAY
JUNEAU, ALASKA**

JULY 3, 2012

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Phase I Environmental Site Assessment
5871 Churchill Way
Juneau, Alaska
July 3, 2012

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1.0 EXECUTIVE SUMMARY

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for the property located at 5871 Churchill Way in Juneau, Alaska (the Site). The Site has been used as a residential home lot since 1961. The Site is developed with a residential structure and a shed on the west side of the property. This Phase I ESA was completed in general accordance with American Society of Testing and Materials (ASTM) Standard E 1527-05. **NORTECH** ranks the significance of on-site contamination at the Site as **medium-risk** at present due to a few potential environmental concerns.

The primary on-site environmental concern are the household hazardous wastes found within the residence and solid waste located on the lot. There does not appear to be any surface staining associated with the waste. An aboveground fuel storage tank is associated with the residence. Petroleum contamination was observed in this area. The other on-site environmental concern is that the on-site residential structure and was constructed before 1978 and may contain ACM or other potentially hazardous materials. A Hazardous Materials Inspection was performed in conjunction with this Phase I Assessment. The Pre-Demolition Hazardous Materials Assessment Report (**NORTECH**, July 2012) report catalogs the hazardous materials identified at this Site. No additional inspection is necessary unless specific concerns are reported.

There are 16 documented contaminated sites located within one mile of the subject property. None of these pose an environmental risk to the subject property.

2.0 INTRODUCTION

2.1 Purpose

The Juneau Housing Trust has contracted **NORTECH** to perform a standard Phase I Environmental Site Assessment (ESA) of a parcel located at 5871 Churchill Way in Juneau, Alaska. The purpose of this assessment is to identify potential environmental concerns prior to acquisition of the property.

The Site legal address is Glacierview Block A, Lot 8, City and Borough of Juneau (CBJ) parcel 5B1201240070. Improvements/development at the property consists of a residential structure and a shed. Figures 1 and 2 of Appendix A depict the Site location and vicinity.

This investigation provides a search of prior and current property uses at the Site and adjacent properties to determine the likelihood of past or present contamination by toxic or hazardous substances.





2.2 Methodology

This report summarizes **NORTECH's** investigation, findings, analysis, and opinions regarding the environmental conditions at the Site. The scope of **NORTECH's** site assessment services is in accordance with American Society of Testing and Materials (ASTM) Practice E 1527-05. The information is provided to assist in the completion of "All Appropriate Inquiry" and to meet the "Due Diligence" requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund") as amended by the Superfund Amendment and Re-authorization Act (SARA) in 1986. Any exceptions to, or deletions from this practice are described in Section 2.3 of this report.

To accomplish the objectives of the project, the following services were provided:

- Review of relevant documentation of the Site, including aerial photographs.
- Review of federal and state databases for known or suspected contaminated sites and leaking underground storage tanks within ASTM search radii.
- Visual assessment of the property for indications of potential environmental issues and hazardous materials.
- Interviews with individuals knowledgeable about the Site and its history.

Upon completion of the research, **NORTECH** reports identified environmental conditions and rates the Site based on the perceived risk of contamination impacts. The risk categories are defined below.

No Risk: No evidence was found to indicate contamination of the Site or that hazardous substances, including petroleum products, have been improperly handled on site. **NORTECH** does not find cause for further investigation.

Low Risk: Investigation has revealed the potential for on-site contamination, the possibility that hazardous substances have been mishandled, a threat of their release exists, and/or off-site contamination has potential to impact the property. The report will include discussion and/or recommendations for further action, as warranted.

Medium Risk: Mishandled hazardous substances or soil and/or water contamination may have been identified at the Site. Identified concerns warrant a Phase II investigation.

High Risk: Mishandled hazardous substances were encountered or there is a high potential for significant on-site contamination. Phase II assessment will be





recommended to determine the actual presence and/or levels of contamination and the need for remedial action.

2.3 Exceptions of Assessment and Limitations

This report summarizes **NORTECH's** investigation, findings, analyses, and opinions regarding the environmental condition of the property based on a review of records and site observations. The work scope delineated by ASTM Practice E 1527-05 is considered adequate to identify significant indications of contamination and major concerns that would represent pivotal environmental issues important to a property owner. The extent of our assessment, by definition, was not of a scope necessary to reveal all conditions with regard to environmental contamination or conformance with regulations, codes, permits of all the agencies having jurisdiction. The purpose of the ESA is to identify existing environmental conditions; our findings should be considered representative only of the time at which the ESA was completed.

Limitations exist with the assessment provided and all environmental issues cannot be addressed in the scope of this effort. For example, ASTM E 1527-05 (Section 13) *Non-Scope Considerations* such as asbestos-containing materials, radon, lead in drinking water, lead-based paint, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines are only addressed if pertinent information is discovered during the assessment and/or is specifically authorized by the client. Specific non-scope considerations include review of the wastewater system construction and a brief analysis of the appropriateness of these systems for the intended use of the property.

This report is a record of research and observations of the subject property as described, and was prepared for the exclusive use of the Juneau Housing Trust and their assigns with respect to the Site. If it is made available to others, it should be for information on factual data only and not as a warranty of surface or subsurface conditions, such as those interpreted from results presented or discussions herein. No other warranty or presentation, either expressed or implied, is included or intended.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description, Site Owner and Current Occupant

The Site is located at 5871 Churchill Way in the Lemon Creek area of Juneau, Alaska. The Site includes a single 6600 square foot parcel that consists of parcel number 5B1201240070 in the Glacierview Subdivision, Block A, Lot 8. The purpose of this Phase I ESA is to identify potential environmental concerns prior to acquisition of the property.





Site Owner: City and Borough of Juneau (CBJ)

Current Occupants: The site is currently unoccupied

3.2 General Site Setting and Description

The Site is located on the west side of Churchill Way, within the Lemon Creek Valley area of Juneau, Alaska. Site photographs are presented in Appendix B.

Site Structures: There are three structures in severe disrepair at the site. The main house is listed at 1536 square feet, and is wood frame construction on a cement foundation. About 54 feet west of the house at the Site is a roughly 380 square foot wooden shed, and southwest of the house is a small wooden shed appearing to be a chicken coop that less than 100 square feet.

Site Utilities: The Site is currently connected to municipal water and sewer service. The Site also uses local electric and telephone service providers.

Climate: Climate data for Juneau is established from the long-term weather observations taken at the Juneau Airport (located northeast of the Site). The annual average air temperature is 41.5 degrees Fahrenheit with average annual precipitation of 58.3 inches. Average monthly temperatures are generally below freezing from November through March.

3.3 Vicinity Characteristics and Hydrogeologic Characteristics

Topography and Slope: The Site is located in the floor of the Lemon Creek Valley. Topography of the property is generally flat, with the overall valley area having a slight slope towards the Gastineau Channel. The subject property is located about 74 feet above sea level.

Local Geology and Hydrogeology: The Site is located in floor of the Lemon Creek Valley. Geology in the Lemon Creek Valley consists of a combination of alluvial terrace deposits and glacial deposits both consisting of with poorly sorted sand, gravels, and cobbles. Lemon Creek generally flows from northeast to southwest towards Gastineau Channel and lies about 500 ft south of the Site. Melt waters from Lemon and Ptarmigan Glaciers are the primary source for Lemon Creek, but Canyon Creek, Sawmill Creek, and several other smaller unnamed tributaries contribute flow throughout the basin. The smaller tributaries flows are influenced primarily by rainfall. Peak flows are generally during the late summer and early fall as a result of heavy rains coupled with high temperatures which enhance glacial melting. Gastineau Channel lies about 8000 ft southwest of the Site.





Depth to Groundwater and Groundwater Flow Direction: Depth to groundwater at the Lemon Creek area fluctuates and is generally no greater than 28 inches below ground surface. Depth to groundwater in proximity to Gastineau Channel is tidally influenced. Groundwater typically flows from east to west/southwest, towards Gastineau Channel.

Surface Water and Surface Water Drainage: The Site surface does not appear to have low spots or areas with inhibited drainage and is relatively flat, similar to the surrounding area. The Site elevation is similar to adjacent streets and parcels with no obvious run-on or run-off concerns. Surface water is assumed to infiltrate through the surface of the Site.

Nearest Surface Water Body: The nearest surface water body is Lemon Creek, which from northeast to southwest towards Gastineau Channel and lies about 500 ft south of the Site.

On-site Wells: None identified or reported.

4.0 RECORDS REVIEW

4.1 Local Government Records

The City and Borough of Juneau Tax Assessing/Property Records were reviewed by Tara Richards of **NORTECH** to gather information regarding past or present uses of the Site and surrounding properties.

4.1.1 Site Ownership (CBJ Assessment Records)

The Site:

Location: Glacierview Block A, Lot 8, parcel 5B1201240070, 5871 Churchill Way
Development Type: Residential home constructed in 1961 with two associated sheds.
Current Owner: City and Borough of Juneau.
Previous Owner: Ling Robert

4.1.2 Adjacent Property Ownership (CBJ Assessment Records)

The area immediately surrounding the Site consists of residential properties. Other nearby properties are primarily residential and/or recreational facilities. Nearby property uses are shown in Figure 2. Adjacent properties are identified and recent ownership records are listed below:

North:

5881 Churchill Way, Residential Lot – Occupied. Owned by Ling Kimberly.





East, across Churchill Way:

5868 Churchill Way, Residential Lot – Vacant. Owned by James Wilcox Trust.

West:

5870 Mountain Avenue, Residential Lot – Occupied. Owned by Robert Merritt.

5850 Mountain Avenue, Residential Lot – Occupied. Owned by Donald Chapman.

South:

5861 Churchill Way, Residential Lot – Occupied. Owned by Lora Mallinger Trustee.

4.2 Environmental Database Searches

Environmental Data Resources, Inc. (EDR) was subcontracted to perform a search of available environmental databases and meet or exceed the requirements of ASTM E 1527-05. Standard ASTM federal databases include: NPL (National Priority List)/Superfund and proposed NPL sites, CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) and CERCLIS NFRAP (No Further Remedial Action Planned) sites, RCRA (Resource Conservation and Recovery Act) CORRACTS (Corrective Action) sites, RCRA TSD (Treatment, Storage and Disposal) facilities, RCRA LQG (Large Quantity Generators), RCRA SQG (Small Quantity Generators), and the ERNS (Emergency Response Notification System) Petroleum and Hazardous Substance Release sites. Supplemental federal databases include NPL CONSENT (Consent Decree) sites, NPL ROD (Record of Decision) sites, delisted NPL sites, FINDS (Facility Index System) sites, HMIRS (Hazardous Materials Information Reporting System) sites, MLTS (Materials Licensing Tracking System) sites, MINES (Mines Master Index File) sites, NPL Lien sites, PADS (PCB Activity Database System) sites, DOD (Department of Defense) sites, Indian Reserv (Indian Reservations), FUDS (Formerly Used Defense Sites), EPA Engineering Controls Sites List (US ENG CONTROL), ODI (Open Dump Inventory), UMTRA (Uranium Mill Tailings Sites) RCRA RAATS (Administrative Tracking System) sites, TRIS (Toxic Chemical Release Inventory System) sites, TSCA (Toxic Substances Control Act) sites, SSTS (Section 7 Tracking System) sites, FTTS (FIFRA – Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA Tracking System sites and U.S. Brownfields (Federal “brownfields” database) sites.

EDR also searched the following state databases: SHWS (State Hazardous Waste Sites, including petroleum contaminated sites), SWF/LF (Solid Waste Facilities and Landfills), LUST (Leaking Underground Storage Tanks), UST (Underground Storage Tank) registration, UST registration on Indian Land, VCP (Voluntary Cleanup Program) sites, Leaking Underground Tanks on Indian Land (INDIAN LUST) AST (Aboveground Storage Tank) registration, Alaska Spills, Alaska Drycleaners, Institutional Control (state institutional controls sites), and Brownfields (state brownfields).





The release date of each data base that EDR searched is included in the EDR report, starting with page 4. The EDR Report is attached as Appendix C. Acronyms listed below are defined on Pages 1 and 2 of the Executive Summary. Sites that were identified in the EDR report within ¼ mile of the Site are shown on the EDR Report Figures.

Databases with no listings within the search radius:

NPL, proposed NPL, Delisted NPL, CERCLIS, RCRA-CORRACTS, RCRA-TSDF, RCRA-LQG, RCRA-SQG, RCRA-CESQG, ERNS, SWF/LF, INDIAN LUST, AST, INDIAN UST, FEMA UST, ENG CONTROLS, INST CONTROL, INDIAN VCP, BROWNSFIELDS, US BROWNSFIELDS, ODI, DEBRIS REGION 9, SWRCY, INDIAN ODI, LUCIS, RCRA-NonGen, DOD, FUDS, CONSENT, ROD UMTRA, MINES, DRYCLEANERS, INDIAN RESERV, SCDR DRYCLEANERS, COAL ASH EPA, COAL ASH, 2020 CORRECTIVE ACTION, Manufactured Gas Plants

One mapped site was found in EDR's search of available ("reasonably ascertainable") government records within the search radius around the target property in the CERCLA NFRAP database.

NORTECH has reviewed EPA and/or ADEC files for the downtown area of Juneau and there are 22 properties of potential concern within one mile of the subject property. Experience and research in this area indicates that the groundwater flow direction is generally to the southwest, toward Gastineau Channel.

4.2.1 The Site

The Site is not listed in the databases.

4.2.2 EPA NPL, CERCLIS, and RCRA Databases

The EPA maintains a listing of NPL and CERCLIS sites, and a Notification list. One CERCLIS NFRAP site was identified within ½ miles of the subject property.

1. SECON Inc., 5717 Glacier Highway
 - CERCLIS NFRAP Site 1000130981
 - May 1985, discovered.
 - December 1987, NFRAP designation, does not qualify for the NPL based on existing information.
 - RCRA-NonGen Site. AKD097246789



4.2.3 ADEC Contaminated Sites Databases (SHWS, LUST, and Spills)

The ADEC listings of Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUST), and contaminated site were reviewed in June 2012. There are 16 listed contaminated sites within one mile of the subject property. One of these sites is open. The majority of the identified contaminated sites are separated hydrogeologically by Lemon Creek or are located down gradient from the subject property. Only one identified contaminated site is located hydrogeologically upgradient from the subject property; this site has been closed. Most groundwater contaminant plumes are generally limited to less than one-quarter of a mile. As discussed above, the groundwater flow direction in the Lemon Creek valley is generally to the south or southwest.

The first the contaminated site listed is within ¼ mile of the subject property.

2. Lemon Creek Correctional Center, 2000 Davis Drive.
 - Hazard ID: 23002, 24921
 - UST site. Facility ID 2555.
 - Three USTs permanently out of use.
 - LUST site. Record Key 2000110007301.
 - Cleanup Complete.
 - SHWS site. File number 1513.26.055
 - Cleanup Complete in May 2001.
 - 10 cubic yards (cy) of petroleum contaminated thermally remediated.
3. Juneau Ready Mix Incorporated, 5717 Glacier Highway.
 - Hazard ID: 24501
 - SHWS site. File number 1516.26.008
 - January 1993: Two USTs removed, petroleum contaminated soil identified.
 - October 1994: 255 cy of soil excavated and process in asphalt batch plant.
 - Cleanup Complete, Site Closure Approved October 1994.
4. United Soil Recycling (USR) Juneau Soil Treatment Facility, 1725 Anka Street
 - Hazard ID: 3981
 - SHWS site. File number 1513.38.052
 - Site contaminated with petroleum from handling practices during soil treatment operation over a four year period. USR filed for chapter 11 bankruptcy fall 2003.
 - March 2004, 12 drums of sorbent pads illegally dumped on-site by unknown persons.
 - March 2004, on-site cleanup and remediation via biocells.
 - July 2004, Site Closure Approved.

5. Hildre Porta Shop, 5641 Glacier Highway
 - Hazard ID: 24654
 - SHWS site. File number 1513.26.059
 - Cleanup complete in March 2002.
 - LUST site. Record key 1998110034501
 - Release date July 2001.
 - Trace levels of GRO, DRO, BTEX detected below cleanup levels in lab analysis of soil samples. Two 2400-gallon tanks closed-in-place, one gas, one diesel. 3 soil borings performed, 5 samples collected at 2 ft bgs.
6. PTI Communications, 5505 Glacier Highway
 - CS ID: 25075
 - SHWS site. File number 1513.26.058
 - October 1997 site added to database. Field screening of excavation soils failed to detect minor DRO release to soils in excavation 12 ft bgs.
 - May 2002 site added to LUST database.
 - June 2004 LUST cleanup initiated for petroleum.
 - June 2004 Site Closure Approved.
 - VCP site. ADEC file number 1513.26.058
7. Reliable Sheet Metal, 5441 Glacier Highway
 - Hazard ID: 23009
 - LUST site. Record key 2001110013101
 - GRO detected at 33 mg/kg, toluene at 0.570 mg/kg, and Ethylbenzene at 1.2 mg/kg in soil collected from near the water table in one of the three soil borings next to the UST site. An above ground fuel storage tank (AST) and dispenser currently occupy the former UST site. The entire area is paved with asphalt except under the AST and dispenser.
 - UST removed in 1998.
 - April 2001 LUST cleanup initiated.
 - May 2007 Site Closure Approved.
 - UST site. Facility ID 2863.
 - Permanently out of use.
8. Capitol Disposal Landfill – 5600 Tongard Ct
 - Hazard ID: 23020
 - SHWS site. File number 1513.26.071
 - Surrounding soils contain decaying trash and debris; groundwater was not encountered in the waste oil UST closure excavation. Chromium was detected above applicable cleanup level in one of two pit confirmation samples. In the same samples, petroleum was detected below applicable cleanup levels, chance of contaminant

- migration is low. Former UST site is given a No Further Remedial Action Planned status with assurance that if the subsurface soils become exposed in the future ADEC will be contacted and additional Site Assessment will be considered.
- March 1999 LUST cleanup initiated.
 - April 2003 Conditional Closure Approved with Institutional Controls
- AIRS site. Facility ID 304
9. R&M Engineering, 6205 Alaway Avenue
- Hazard ID: 23017
 - SHWS site. File number 1513.26.069
 - October 2000 site added to database. UST assessment performed. Three soil borings at former UST location and dispenser piping. Soil samples from borings in silty gravels below bottom of tank had acrid odor, sheen and high PID screening readings. Piping run sample had sheen. Lan analysis of these soils for GRO/BTEX had low GRO and BTEX just above cleanup levels.
 - December 2000 LUST cleanup initiated.
 - September 2002 longterm monitoring established. Groundwater monitoring well sampled for analysis of dissolved VOCs in water by Method SW8260B. Benzene concentrations in soils detected in SC soil borings is not migrating to groundwater.
 - October 2002 site closure approved. Long term monitoring complete.
10. Construction Machinery Inc., 5295 Glacier Highway
- Hazard ID: 1980
 - SHWS site. File number 1513.38.030
 - January 1995 contaminated soil from drips, spills, and oil changes. Report summarized assessment data and proposes corrected action. CAP approved.
 - December 1995 site closure approved.
11. Lewis Motors, Inc., 5245 Glacier Highway
- Hazard ID: 24551
 - SHWS site. File number 1513.26.024
 - September 1996 site added to database. LUST cleanup initiated for petroleum. 30-50 cy diesel contaminated soil excavated in conjunction with tank closure.
 - October 1996 UST Assessment. Contamination from diesel LUST spread subsurface in northerly direction in small interface zone between 2.6 ft of overburden and bottom clay layer. 65 cy of soil affected.
 - November 1997 site closure approved.
12. Williams Express Store #5034, 6585 Glacier Highway

- Hazard ID: 23124
 - SHWS site. File number 1513.26.074
 - December 2003 Site added to database.
 - April 2004 UST Assessment. Petroleum soil contamination observed and confirmed by analysis. Groundwater contamination not observed or identified.
 - May 2004 site inspection for available surface water ponds to monitor for off-site migration of residual benzene soil contamination. A stream located adjacent to property line to the east.
 - June 2004 LUST cleanup initiated.
 - October 2004 contaminated soil was transported off-site for remedial treatment.
 - November 2004 long term groundwater monitoring established.
 - November 2005 cleanup complete determination issued.
 - VCP site. ADEC file number 1513.26.074.
 - Cleanup complete.
13. Lemon Creek Stockpile, Lemon Creek Gravel Pit.
- Hazard ID: 1978
 - March 1994: Contaminated soils stockpile of 50 cy or less with a maximum concentration of 4,200 ppm DRO to be located at the Lemon Creek Gravel Pit.
 - January 1998: Site Closure Approved.
14. Lemon Creek Police Station, Alaway Avenue.
- Hazard ID: 2976
 - September 1998: Petroleum contamination resulting from buried waste from prior construction activities. Cleanup approved. VCP approved.
 - January 1999: Cleanup Complete
15. Gas N Go, 5165 Glacier Highway.
- Hazard ID: 24522
 - LUST site. Event ID 1203.
 - UST Facility ID 2269.
 - August 1993 LUST Site created in CSP for GRO, BTEX, CRO contamination of soil and groundwater during gasoline/diesel UST removals.
 - Longterm groundwater monitoring occurring.
 - Site Open.
16. CBJ Public Works Division, 5433 Shaune Dr.
- Hazard ID: 24531
 - Tank closure and two follow-up excavations recovered 50 cy of weathered petroleum contaminated soil. Depth proceeded to

mechanical limit of the excavator, 11 ft bgs; groundwater was not encountered. Soil aeration piping was installed and nitrogen rich fertilizer was added to promote bioremediation of the remaining contaminated soil. In April 2001 the CBJ Lemon Creek contaminated soil storage stock was remediated by incorporation into asphalt at the Bicknell Plant in Juneau.

- February 2005: Institutional Control Record Established.
 - Elevated concentrations of DRO remain in soil underlying the former UST site on the southwest corner of the property. The quantity of soil is estimated at less than ten cy. If groundwater supply well installation on the property is planned, the DEC will be notified in advance to provide oversight to ensure drinking water and petroleum regulations are not exceeded. If removal of soil from the contaminant plume area of the property becomes necessary the DEC will be notified in advance to ensure that final placement of the soil does not violate water quality or petroleum regulations.

17. CBJ Valley Court Lift Station, Corner of Anka Street and Glacier Highway

- Hazard ID: 25162
- November 1999: Buried diesel tank spill impacted material adjacent to the sewer main and the former lift station generator building. Removal action recovered accessible DRO contaminated fill material under the building and the piping. Lateral migration of the petroleum release was confined by native silt and peat material that lined the utility corridor. The highest concentrations of DRO and benzene detected in residual soil under the piping are 8,300 mg/kg and 6 mg/kg respectively.
- April 2007: Institutional Control Record established.
- October 2010: Institutional Control Record Removed. Cleanup complete.

4.2.4 ADEC UST Registration

ADEC requires the registration of gasoline, diesel, and used-oil USTs, but does not currently regulate buried heating oil tanks. In addition to the LUST sites listed above, the ADEC UST database indicates that there are four permanently out of use USTs and two in use UST sites within one mile of the subject property. All former UST locations are located down gradient from the subject property.

1. UST Facility 2269 – Gas n Go, 5165 Glacier Highway. Six USTs, 4 are permanently out of use and 2 are in use.
2. UST Facility 151 – Juneau and Douglas Telco. 5405 Glacier Highway. One UST permanently out of use.
3. UST Facility 1177 – Public Works Utility Division, 5433 Shaune Dr. Two USTs permanently out of use.
4. UST Facility 3039 – Fred's Auto, 5450 Glacier Highway. One UST permanently out of use.

4.2.5 ADEC Solid Waste Disposal Sites

One Class I solid waste disposal site is located within a one mile radius of the subject property. The disposal site is located downgradient.

1. Juneau Capitol Disposal Landfill, 5600 Tongard Court. Permit number SW1A004-15.

4.3 Aerial Photographs

Aerial photographs from were reviewed for past development/uses of the Site and general vicinity. Photographs from 1981, 1998, and 2006 have been reproduced and are included as Figures 3 through 5 in Appendix A. The subject property appears similar in all photos reviewed.

5.0 SITE INSPECTION AND INTERVIEW

NORTECH personnel Tara Richards, Doug Kolwaite, and Ashley Bruce performed a visual inspection of the Site on June 21 and 26, 2012. CBJ owns the Site, which has an area of 6,600 square feet. The physical address is 5871 Churchill Way and the legal address is Glacierview Block A, Lot 8, parcel 5B1201240070. The Site is currently developed with a residential structure and two sheds. The residential structure and both sheds on the site are in poor condition and are unsafe for use. The roof in the larger shed is collapsing with evidence of a possible fire and appears unsafe for entry.

We began by performing a Site walkthrough to identify possible environmental concerns on the property. We then assessed the interior of the residence on the property. One roll of paper labeled as asbestos paper was identified in the rear/south entryway room. Our site walkthrough also located several known household hazardous wastes including fluorescent light bulbs, PCB containing ballasts, aerosols cans, paint, and fire extinguishers.

The home has an AST located on the western corner of the south side of the residence. The AST was used to store heating fuel to heat the home but was found to be empty at the time of inspection. We assessed the AST for petroleum contamination by advancing three soil borings to five ft bgs in the vicinity of the tank. A garden hose was observed to be taped to the discharge valve of the tank (see Site photographs).

There is city sewer service at the site. No septic contamination was observed.

Our site visit also located several hazardous materials or containers used for hazardous materials, e.g. plastic fuel containers and car batteries, within large shed. These items, in addition to the items found inside the residence, are documented and presented in



the Pre-Demolition Hazardous Materials Assessment Report (**NORTECH**, July 2012) prepared and submitted in conjunction with this Phase I Assessment Report.

6.0 ANALYSIS

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for the property located at 5871 Churchill Way in Juneau, Alaska. This Phase I ESA was completed in general accordance with ASTM Standard E 1527-05. This section summarizes the history of the Site and details **NORTECH's** opinions related to on-site and off-site environmental concerns.

6.1 Site Summary

The Site is currently owned by CBJ. Ling Robert was the previous owner. The two-story residential structure was constructed in 1961. The property is 6,600 square feet in area and is physically located at 5871 Churchill Way in the Lemon Creek area of Juneau, Alaska. The legal address is Glacierview Block A Lot 8, parcel 5B1201240070. The Site is currently zoned for multi-family residential. City sewer and water, electric and telephone utilities are available to the Site.

6.2 On-site Concerns

Environmental Concerns

The primary environmental concerns at the site are the hazardous materials identified during the Hazardous Materials Inspection performed in conjunction with this Phase I Assessment. These items are documented and categorized in the Pre-Demolition Hazardous Materials Assessment Report (**NORTECH**, July 2012). These items are located inside the residence, inside the large shed, and scattered around the site.

An area of petroleum soil contamination was identified at the Site, due to the AST associated with the residence. The extent of the contamination may be less than one yard of petroleum contaminated soils. Full assessment and contaminated soil removal may be required after the residence has been removed.

NORTECH recommends the removal of the solid waste from the property. The structures located on site are in poor condition. The on-site residential structure was constructed prior to 1978. Due to its early construction date, it may contain ACM and/or other potentially hazardous materials may have been used during its construction.

6.3 Nearby Potential or Known Contaminated Sites

There are 16 listed contaminated sites within one mile of the subject property. One of these sites is open. The majority of the identified contaminated sites are separated hydrogeologically by Lemon Creek or are located down gradient from the subject





property. Only one identified contaminated site is located hydrogeologically upgradient from the subject property; this site has been closed. Most groundwater contaminant plumes are generally limited to less than one-quarter of a mile. As discussed above, the groundwater flow direction in the Lemon Creek valley is generally to the south or southwest. Thus, contamination of the subject property by nearby contaminated sites is not likely.

7.0 CONCLUSIONS AND RECOMMENDATIONS

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for Glacierview Block A Lot 8, parcel 5B1201240070, 5871 Churchill Way in Juneau, Alaska. **NORTECH** has completed this Phase I ESA in general accordance with ASTM Standard E 1527-05. Any exceptions to, or deletions from, this practice are described in Sections 2.3 of this report.

NORTECH ranks the significance of on-site contamination at the Site as *medium-risk* at present and due to the identification of ASTM recognized environmental conditions. The investigation has also identified a few potential environmental concerns and non-ASTM issues with the existing residential structure and mobile homes on the Site. **NORTECH** has developed the following conclusions and recommendations associated with these conditions and concerns:

On-site Environmental Concerns

- Household Hazardous Wastes
 - ACM Paper
 - Plastic hazardous materials containers
 - Fluorescent light bulbs
 - Buckets of used motor oil
 - Car batteries
- Aboveground Fuel Storage Tank
 - Improper fuel lines attached to tank
 - Petroleum contamination of soil observed.
- The on-site residential structure and sheds were constructed prior to 1978
 - ACM or other potentially hazardous materials may have been used in construction
 - May need a demolition inspection prior to landfill disposal

Off-site Concerns

- None





8.0 SIGNATURES & QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

NORTECH is a Fairbanks-based, professional consulting firm, established in 1981, offering environmental engineering, civil engineering, and industrial hygiene consulting services. **NORTECH** has offices in Fairbanks, Anchorage and Juneau and has completed numerous Phase I ESAs and other property and/or building inspections across Alaska.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. For further explanation of personnel qualifications, see Appendix D.

Jason Ginter, Juneau Technical Manager for **NORTECH**, has a B.S. degree in Chemistry. He has over 19 years experience in the environmental arena specializing in site investigations, property assessments, and contaminated sites remediation. Mr. Ginter has completed over 100 Phase I ESAs in Alaska.

A handwritten signature in black ink, appearing to read "Jason Ginter".

Jason Ginter
Juneau Technical Manager

Tara Richards, Environmental Professional for **NORTECH** has a B.S. in Geophysical Engineering and has experience conducting property assessments, environmental investigations, groundwater monitoring, laboratory analysis, and other environmental fieldwork.

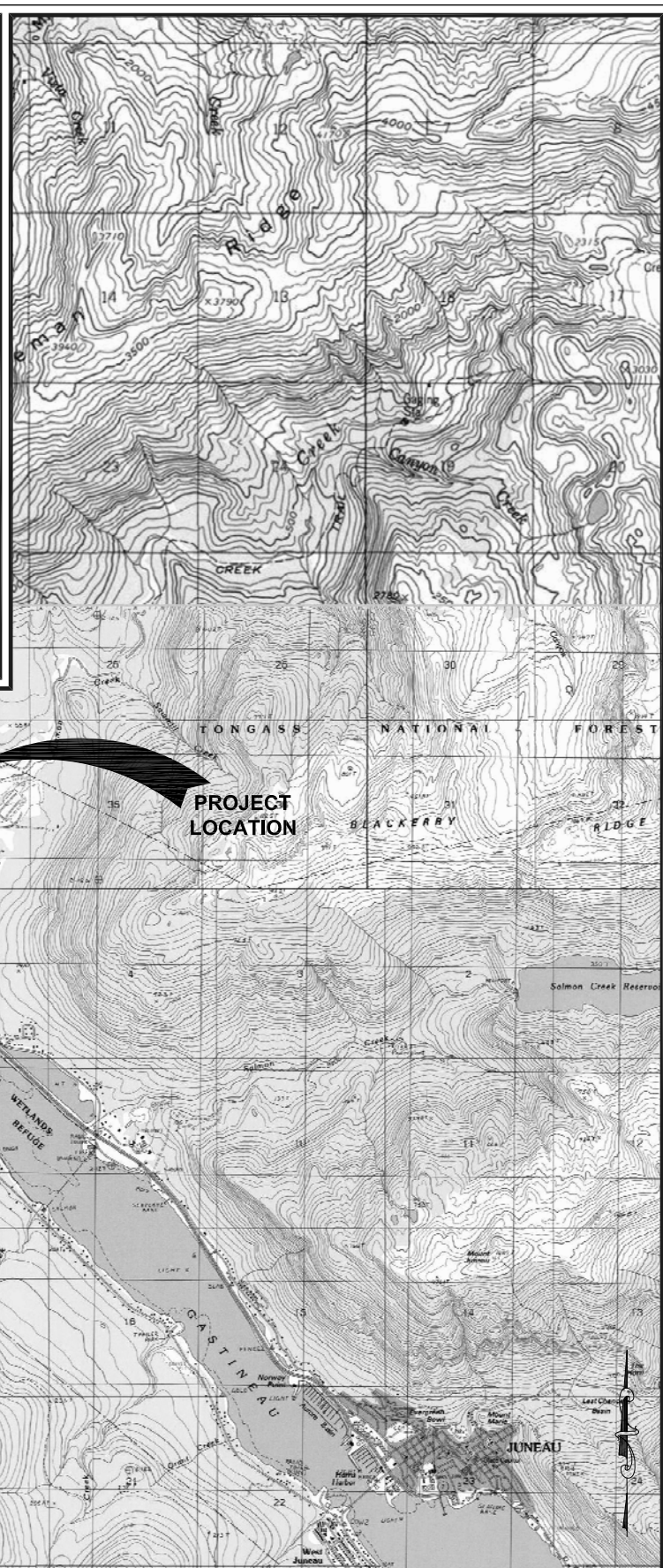
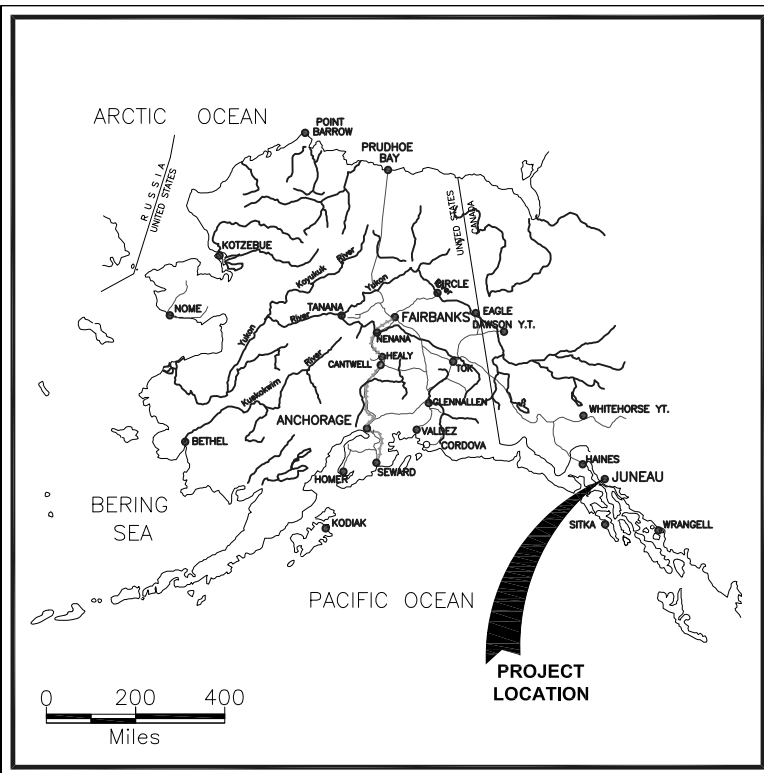
A handwritten signature in black ink, appearing to read "Tara Richards".

Tara Richards
Environmental Professional



APPENDIX A

Figures



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
 2400 College Road, Fairbanks, Alaska 99709 Ph: 907-452-5688
 3105 Lakeshore Dr. Anch, Alaska 99517, Ph: 907-222-2445
 4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

Location Map
 5871 Churchill Way
 Juneau, Alaska

SCALE: 1"=1 mile	FIGURE: 1
DESIGN: TR	
DRAWN: CMR	
PROJECT NO: 12-1055	
DWG: 121055a	
DATE: 6/28/2012	



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
 2400 College Road, Fairbanks, Alaska 99709 Ph: 907-452-5688
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 4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

Vicinity Map
 5871 Churchill Way
 Juneau, Alaska

SCALE: 1" = 100'	FIGURE: 2
DESIGN: TR	
DRAWN: CMR	
PROJECT NO: 12-1055	
DWG: 121055a	
DATE: 6/28/2012	



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
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1981 Lemon Creek Aerial Photo
5871 Churchill Way
Juneau, Alaska

SCALE: 1" = 8'	FIGURE: 3
DESIGN: TR	
DRAWN: CMR	
PROJECT NO: 12-1055	
DWG: 121055a	
DATE: 8/28/2012	



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
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4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

1998 Lemon Creek Aerial Photo
5871 Churchill Way
Juneau, Alaska

SCALE: 1" = 10'	FIGURE: 4
DESIGN: TR	
DRAWN: CMR	
PROJECT NO: 12-1054	
DWG: 121054a	
DATE: 8/28/2012	



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
2400 College Road, Fairbanks, Alaska 99709 Ph: 907-452-5688
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4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

2006 Lemon Creek Aerial Photo
5871 Churchill Way
Juneau, Alaska

SCALE: 1" = 8'	FIGURE: 4
DESIGN: TR	
DRAWN: CMR	
PROJECT NO: 12-1054	
DWG: 121054a	
DATE: 8/28/2012	

APPENDIX B

Site Photographs



Photo 1: Front of residence, showing east side.



Photo 2: Rear of residence, showing west side.



Photo 3: Large shed.



Photo 4: Small shed, underneath tree in backyard.



Photo 5: Plastic hazardous materials storage jugs in large shed area.



Photo 6: Hazardous materials in large shed area.



Photo 7: Used oil in large shed.



Photo 8: Large shed is partially constructed of old freezer, potential hazmat.



Photo 9: Aboveground fuel storage tank on South side of residence.



Photo 10: Improper fuel line connection on AST. Area of soil contamination.



Photo 11: *Hazardous materials outside of residence.*



Photo 12: *Example of hazardous materials identified inside residence.*



Photo 13: Residence garage/room 6. Most hazardous materials identified in residence are stored in this room.



Photo 14: Hazardous material identified in Room 1. Asbestos paper.