



**BGES, INC.**  
Providing Environmental and Geological Consulting Services

1042 East 6<sup>th</sup> Avenue  
Anchorage, Alaska 99501  
Phone: (907) 644-2900

126 SW 148<sup>th</sup> St Suite C100-267  
Seattle, Washington 98166  
Phone: (206) 569-4554

[www.BGESINC.com](http://www.BGESINC.com)



June 8, 2022

Robert McGinn  
Regional Environmental Compliance Coordinator  
Environmental Compliance and Sustainability Branch  
Infrastructure Management Division  
National Wildlife Refuge System

**RE: WORK PLAN FOR LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT (ESA);  
BETHEL BUREAU OF INDIAN AFFAIRS (BIA) ADMINISTRATIVE SITE, BETHEL, ALASKA**

Dear Mr. McGinn:

BGES, Inc. (BGES) is pleased to present our work plan for conducting a limited Phase II ESA at the above-referenced property in Bethel, Alaska; hereafter referred to as the subject property (Figure 1). The Bethel BIA site, also referred to as the Bethel BIA Administrative site, is located approximately 4 miles west of the City of Bethel, Alaska. The subject property is approximately 45 acres in total size and has been managed as two separate 27-acre and 18-acre sub-parcels.

The United States (US) Air Force (USAF) originally developed the land in 1957 with construction of a White Alice Communication System (WACS). WACS facilities included a 60,000-square foot Composite Building (Building 413) and numerous support buildings and structures. By 1966, most USAF activities ceased, and BIA began using the Composite Building as the Bethel Administrative Headquarters. By 1990, BIA ended its use of the property. No use of the property has occurred since then, although the entire 45 acres were conveyed to the U.S. Fish and Wildlife Service (USFWS) in 1980. The USFWS plans to transfer ownership of the 27-acre parcel to the Yukon-Kuskokwim Health Corporation (YKHC) after cleanup.

In 1992, approximately 106,000 gallons of diesel were released from a 400,000-gallon fuel tank when an elbow joint at the tank ruptured. An estimated 63,000 gallons were recovered during response actions, another 15,900 gallons reportedly evaporated, and 27,100 gallons were estimated to have remained in the environment. Numerous other source areas are present throughout the subject property, and releases of petroleum, oil, and lubricants (POLs), polychlorinated biphenyls (PCBs), and pesticides have been

documented during previous investigations. It is our understanding that asbestos has been identified beneath the slab of Building 413, and that the asbestos will be accessible through gaps in the slab such that bulk samples can be collected without further disturbing the material.

The contaminants of concern associated with this site are summarized in the following table.

Contaminant of Concern	ADEC Cleanup Criteria		NESHAP Limit
	Soil <sup>1</sup>	Groundwater <sup>2</sup>	
Asbestos	n/a	n/a	1 percent
Diesel Range Organics	250 mg/kg	1,500 µg/L	n/a
Residual Range Organics	10,000 mg/kg	n/a	n/a
Polychlorinated Biphenyls (PCBs)	1 mg/kg	n/a	n/a
1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane (DDT)	5.1 mg/kg	n/a	n/a
Volatile Organic Compounds (VOCs)	Varies	n/a	n/a
Polynuclear Aromatic Hydrocarbons (PAHs)	Varies	n/a	n/a

<sup>1</sup> Soil cleanup criteria for PCBs, DDT, VOCs, and PAHs are obtained from ADEC 18 AAC 75.341, Table B1, Method 2, Migration to Groundwater values except for benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, lead, and PCBs; which are obtained from the more stringent Under 40-inch zone (referring to annual precipitation) human health pathway (November 18, 2021). Soil cleanup criteria for DRO and RRO are obtained from Table B2, Method 2, Under 40-inch zone (referring to annual precipitation), Migration to Groundwater values except for RRO, which is obtained from the more stringent Ingestion pathway (November 18, 2021).

<sup>2</sup> Groundwater cleanup criteria are obtained from ADEC 18 AAC 75.345, Table C (November 18, 2021).

NESHAP = National Emission Standards for Hazardous Air Pollutants; n/a = not applicable; mg/kg = milligrams per kilogram; µg/L = micrograms per liter

## SCOPE OF WORK

The field sampling activities will be performed by a Qualified Environmental Professional (QEP) as defined by the Alaska Department of Environmental Conservation (ADEC); and in general accordance with the ADEC Field Sampling Guidance (January 2022). Resumes for BGES personnel who will be onsite during these activities are included in Attachment A. The assessment activities are designed to evaluate the remaining presence of contamination within the soil and groundwater on the subject property, as well as to evaluate the presence of any remaining hazardous building materials. To accomplish this goal, we will collect up to seven samples of potentially asbestos-containing materials from beneath the slab of Building 413; advance twelve soil borings on the southeastern portion (18 acre parcel) of the subject property to further characterize soil contamination within this portion of the subject property;

advance ten soil borings in the former vicinity of Building 413 on the northern portion (27 acre parcel) of the subject property to characterize contamination remaining in the vicinity of the building and beneath the foundation; and sample groundwater from 11 monitoring wells installed on the northern portion (27-acre parcel) of the subject property in order to assess levels of remaining contamination stemming from the 1992 diesel fuel release.

### **Task 1 – Utility Locates**

BGES will submit a request to the one-call utility locate service to have any public underground utilities on the subject property marked. If necessary, BGES will request that a representative from the USFWS meet the locators on-site to ensure that utilities are marked within the appropriate areas. All private utilities associated with buildings on the site were reportedly removed during the course of demolition activities in 2020; therefore, we have assumed that the services of a private utility locator will not be required.

### **Task 2 – Bulk Sampling for Asbestos**

BGES will provide an AHERA-Certified Building Inspector to perform the asbestos testing that comprises the investigation of potential asbestos containing materials at the subject property. The asbestos inspection is anticipated to include the collection of up to seven samples from the Concrete Asbestos Board (CAB) material beneath the slab of Building 413. All buildings and building sites have been inspected for asbestos, and asbestos is not expected to be encountered in any other locations. Detailed notes and photographs will be taken during this process, and estimates will be made of the quantities of asbestos-containing materials that are identified in the inspected areas.

The samples will be collected by using clean, stainless-steel spoons or other hand tools to collect material into labeled, sealable, leak-proof polyethylene bags. The samples will be packaged in a sealed, cardboard box and sent along with a chain of custody form to EMSL Laboratory in San Leandro, California. The chain of custody form will be released and signed by the BGES Building Inspector prior to shipping. A standard 5 business-day turnaround time will be requested for the analyses.

### **Task 3 – Soil Sampling**

BGES personnel will oversee the advancement of 12 planned soil borings on the southeastern portion of the subject property and 10 soil borings on the northern portion of the subject property that will be strategically located to define the extent of soil and groundwater contamination in areas where

contamination has previously been identified. Within the southeastern portion of the subject property, one sample will be collected from each of seven planned soil borings at the “Pit 3” site, plus one duplicate sample; one sample will be collected from a single soil boring at the “Drum Area 1” site, plus one duplicate sample; and one sample will be collected from each of four soil borings at the “Drum Area 2” site, plus one duplicate sample. The approximate locations of these proposed soil borings are depicted on Figure 2 and the approximate coordinates are listed within Table 1. Within the northern portion of the subject property, one sample will be collected from each of 10 soil borings in the vicinity of the former location of Building 413. The approximate locations of these proposed soil borings are depicted on Figure 3, and the approximate coordinates are listed within Table 1. It is noted that the locations of the soil borings are subject to modification during field activities and will be based on field conditions.

The soil borings will be advanced by Discovery Drilling, using a truck-mounted direct push drilling rig equipped with Macrocore® samplers for the collection of soil samples. All soil borings will be advanced to a depth of approximately 10 feet below grade (bg). Soil samples will be collected continuously from grade to 10 feet bg in 2.5-foot intervals.

Upon retrieval, the Macrocore® samplers will be opened and the samples for laboratory analyses will be collected immediately into laboratory-supplied containers. The soil samples will be collected using clean, stainless-steel spoons and disposable syringes (also known as soil core samplers). The sample portions slated for volatile analyses will be collected first and preserved immediately with methanol provided by the laboratory. The procedure for collecting soils for analysis for volatile organic compounds (VOCs) will be as follows; a syringe will be pressed into the soil core until the sample chamber is filled to the 10-gram mark. The syringe will be removed from the soil core and any excess soil from outside the syringe and beyond the mouth of the syringe will be brushed away. Then the 10-gram sample will be expelled into a 40 milliliter (mL) glass vial with 10 mL of methanol. The procedure for collecting soils for analysis for gasoline range organics (GRO) will be the same, with the exception that five, 5-gram soil cores will be collected and placed into a 40 mL glass vial with 25 mL of methanol. The remaining sample portions slated for other analyses will be collected using stainless-steel spoons and placed directly into glass jars. After collection of each laboratory soil sample, a portion of the remaining material will be collected for field screening, by placing the soil in sealable plastic bags, which will be labeled with unique sample numbers and the times of collection. These data and notes regarding the geology of the sample cores will be recorded on soil boring logs.

Field screening will be performed utilizing a photoionization detector (PID) in general accordance with ADEC Field Sampling Guidance (January 2022). Prior to conducting any field screening during each day of field work, the PID will be calibrated with 100 parts per million isobutylene calibration gas. A blank plastic bag sample will be tested to evaluate potential background influence on PID readings, by inserting the probe of the PID into an empty bag. The result of the blank bag test will be documented in the field notes. The field screening samples will be agitated for approximately 15 seconds and then heated to at least 40 degrees Fahrenheit in ambient conditions, on the heater of a vehicle, or in a warmed structure. After at least 10 minutes, and within 1 hour of collection, the bags for field-screening will be agitated for approximately 15 seconds, after which the probe of the PID will be inserted into the bag and the maximum reading for each sample will be recorded.

If more than one elevated PID reading is observed for a single soil boring, then the soil sample from the location that exhibits the greatest PID reading will be submitted for laboratory analysis. In the absence of elevated PID readings, or visual or olfactory evidence of contamination, the soil sample will be collected from the soil/water interface, if present, or from a depth where contamination would most likely be present, based on historic sampling results.

The laboratory samples will be labeled, placed in a chilled cooler, and shipped via Alaska Air Cargo along with chain of custody documentation to the laboratory. As a quality control procedure, one duplicate soil sample will be collected per day, with a minimum of one duplicate sample per 10 project samples or per source area and submitted “blindly” to the laboratory. A trip blank sample will accompany all sample containers scheduled for volatile analyses during the entire sampling and handling process.

Soil boring locations will be recorded using a sub-meter global navigation satellite system (GNSS). All soil samples that are selected for laboratory analyses will be submitted to Pace Analytical Services, LLC (Pace) in Minneapolis, Minnesota; an ADEC-approved laboratory, for analysis of diesel range organics (DRO) by Alaska Method (AK) 102; residual range organics (RRO) by AK 103; volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260D or equivalent approved method; and polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270 SIM or equivalent approved method. All samples will be submitted for analysis on a standard 10 business-day turnaround time.

After completion of sampling, the soil borings will be backfilled with hydrated bentonite chips. Investigation-derived waste (IDW) will include, but is not limited to, drill cuttings, field-screening soil

samples, used methanol vials, syringes, plastic bags, and nitrile gloves. The soil cuttings will be left onsite in sealed, 55-gallon drums labeled as potentially contaminated soils; pending analytical results. Upon receipt of the analytical results, permission will be requested of the ADEC to transport and dispose of the contaminated soils at an appropriate facility. If the sample results are favorable, permission will be requested of the ADEC to spread the drill cuttings onsite in the approximate locations of the soil borings.

#### **Task 4 – Groundwater Monitoring**

Twelve monitoring wells were installed on the subject property in 1995 in order to monitor potential groundwater contamination stemming from the 1992 release of diesel fuel. It is our understanding that one of these wells, Monitoring Well MW12, was removed during remedial actions in 1996 and that the remaining 11 wells are still present on the subject property (Figure 4). These monitoring wells will be located by a representative from the USFWS prior to our arrival on site and access routes will be cleared of brush. Prior to BGES' arrival on site, we will also obtain written authorization from Bethel Native Corporation (BNC) to access Monitoring Well MW11, which is located on their land to the east of the subject property.

Prior to sampling, the depth to water and the total depth of the monitoring wells will be measured utilizing a decontaminated electronic interface probe in order to establish an estimated groundwater gradient within the site. At this time, the wells will also be assessed for potential damage. It is our understanding that depths to groundwater have historically fluctuated by significant amounts. Any wells that are damaged or that do not contain sufficient levels of water at the time of our assessment will not be sampled. One duplicate sample will also be collected per ten samples from the well(s) that is/are expected to be the most contaminated based on historical sampling data and submitted "blindly" to the laboratory. BGES will purge up to three well volumes from each well prior to sampling. The monitoring wells will be purged and sampled using a positive displacement bladder pump equipped with a new bladder, and new polyethylene tubing. The flow rate during purging and sample collection will be between 50 and 500 milliliters per minute (mL/min), to allow for low-flow sampling in accordance with ADEC guidelines. During purging, the depth to water will be monitored in the well to verify that the drawdown is less than 0.3 foot, assuming recharge allows for this limited drawdown. BGES will periodically measure water quality parameters (pH, temperature, oxidation reduction potential, and conductivity) using a YSI meter equipped with a flow-through cell. If these parameters stabilize in accordance with ADEC Field Sampling Guidance (January 2022) prior to removal of three well volumes, BGES will stop purging and collect the water sample. If not, BGES will remove approximately three well volumes from each well prior to

collection of the water sample. The purge water will be collected in 5-gallon buckets that will be temporarily stored onsite.

Water samples will be collected directly into laboratory-supplied containers, and the samples for volatile analyses will be collected first. Care will be exercised to ensure that none of the preservative is spilled, and that no headspace is created within the laboratory vials destined for volatile analyses. The bladder pump will be decontaminated after collection of each sample. As a quality control measure, a trip blank sample will accompany the groundwater samples slated for volatile analysis during sampling and handling. The groundwater samples will be labeled, placed in a chilled cooler, and shipped via Alaska Air Cargo to Pace in Minneapolis, Minnesota; an ADEC-approved laboratory.

Other than purge water, IDW will include decontamination water, and disposable sampling supplies. The decontamination water will be combined with the purge water. This water will then be treated with granular activated carbon (GAC) by filtering the water as it is poured from one bucket into another. Assuming the water does not exhibit a sheen, the water will then be discharged to the ground surface in a manner that will not cause undue erosion and is more than 100 feet from any surface water features. If a sheen is present, then the water will be placed in a drum with a secure lid that will be clearly labeled as to its contents and contact information; pending analytical results of the laboratory samples. Any spent GAC will be transported by BGES to US Ecology in Anchorage for disposal, after approval from the ADEC is obtained with a completed Transport, Treatment, or Disposal Approval Form. Any other solid wastes (used, non-hazardous waste such as gloves, tubing, etc.) produced during sampling will be disposed of at the Bethel Landfill.

The groundwater samples will be submitted to Pace in Minneapolis, Minnesota; an ADEC-approved laboratory. A standard 10-business day turnaround time will be requested for the analyses. Groundwater samples will be submitted for analysis of DRO by AK 102.

## **Task 5 – Report Preparation**

BGES will prepare a comprehensive report detailing the results of the field activities, in accordance with ADEC requirements. As such, the report will include a narrative description of project activities, a summary of the analytical results, tabulated analytical data, figures showing the project location and the asbestos sample, soil boring, and monitoring well locations, conclusions, and recommendations. Photographs, field notes, the complete laboratory data packages, a data quality checklist for each laboratory work order, and a conceptual site model will be included in appendices to the report, as required

by the ADEC.

## PROJECT SCHEDULE

We have developed the preliminary schedule shown below to assist you with planning for project completion. This schedule is an estimate, and is highly dependent upon the review and approval of our work plan by the ADEC, the availability of the subcontractor, and weather conditions.

Submit Draft Work Plan to USFWS for Review	April 18, 2022
Receive Comments from USFWS	May 1, 2022
Submit Work Plan to ADEC	May 5, 2022
Submit Revised Work Plan to ADEC	June 3, 2022
Obtain ADEC Approval of Work Plan	June 8, 2022
Task 1 – Utility Locates	June 28 – 29, 2022
Task 2 – Asbestos Sampling	July 11, 2022
Task 3 – Soil Sampling	July 12 – 13, 2022
Task 4 – Groundwater Sampling	July 14 – 15, 2022
Task 2 – Asbestos Sampling Laboratory Analysis	July 18 – 22, 2022
Tasks 3&4 – Laboratory Analysis	July 18 – Aug 1, 2022
Task 5 – Submit Draft Report to USFWS	August 19, 2022
Receive Comments from USFWS	September 2, 2022
Submit Report to ADEC	September 9, 2022



## REFERENCES

ADEC 18 Alaska Administrative Code (AAC) 60, Solid Waste Management. February 25, 2022.

ADEC 18 AAC 75, Oil and Hazardous Substances Pollution Control. Parts 75.325 through 75.390. November 18, 2021.

ADEC Field Sampling Guidance. January 2022.

Ahtna Global, LLC Demolition Report, Former Bureau of Indian Affairs Site, Bethel, Alaska. September 2021.

ATC Limited Asbestos-Containing Materials Survey, Buildings 413, 420, 422 and 423 Demolition, Bethel, Alaska. September 9, 2020

Bethel Environmental Solutions, LLC Building 413 Soil and Debris Characterization Report, Bethel BIA 27-Acre Parcel Site, Yukon Delta National Wildlife Refuge, Bethel, Alaska. January 2012.

Bethel Services, Inc. Site Investigation Report, Bethel BIA 27-Acre Parcel, Yukon Delta National Wildlife Refuge, Bethel, Alaska. October 2010.

EMCON Alaska, Inc. (EMCON) Final Report, Sampling Activities, Bethel BIA Administrative Site, Bethel, Alaska. April 2000.

Nortech, Inc. Former BIA Site Restoration Study, Bethel, Alaska. May 4, 2016.

North Wind, Inc. Remedial Investigation and Removal Report, Bethel Airport and Bethel BIA Headquarters, Bethel, Alaska. May 2017.

Phukan, Inc. Assessment of Burned BIA Complex, Bethel, Alaska. February 2002.

A list of the ADEC's comments regarding this work plan, and BGES' responses, is included in Attachment B. For the ADEC's convenience, we have included an approval block below. We look forward to working with you towards the successful completion of this project. If you have any questions concerning our work plan, please do not hesitate to contact us.

Sincerely,

**BGES, INC.**

Prepared by:



Carson Kent  
Environmental Scientist II

Reviewed by:



Robert N. Braunstein  
Principal

**WORK PLAN AUTHORIZATION (21-113-01R1):**

I have reviewed this work plan for the limited Phase II ESA at the Bethel BIA Site in Bethel, Alaska. I approve of the planned activities presented in the work plan with the following modifications/additional comments, if applicable:

---

---

---

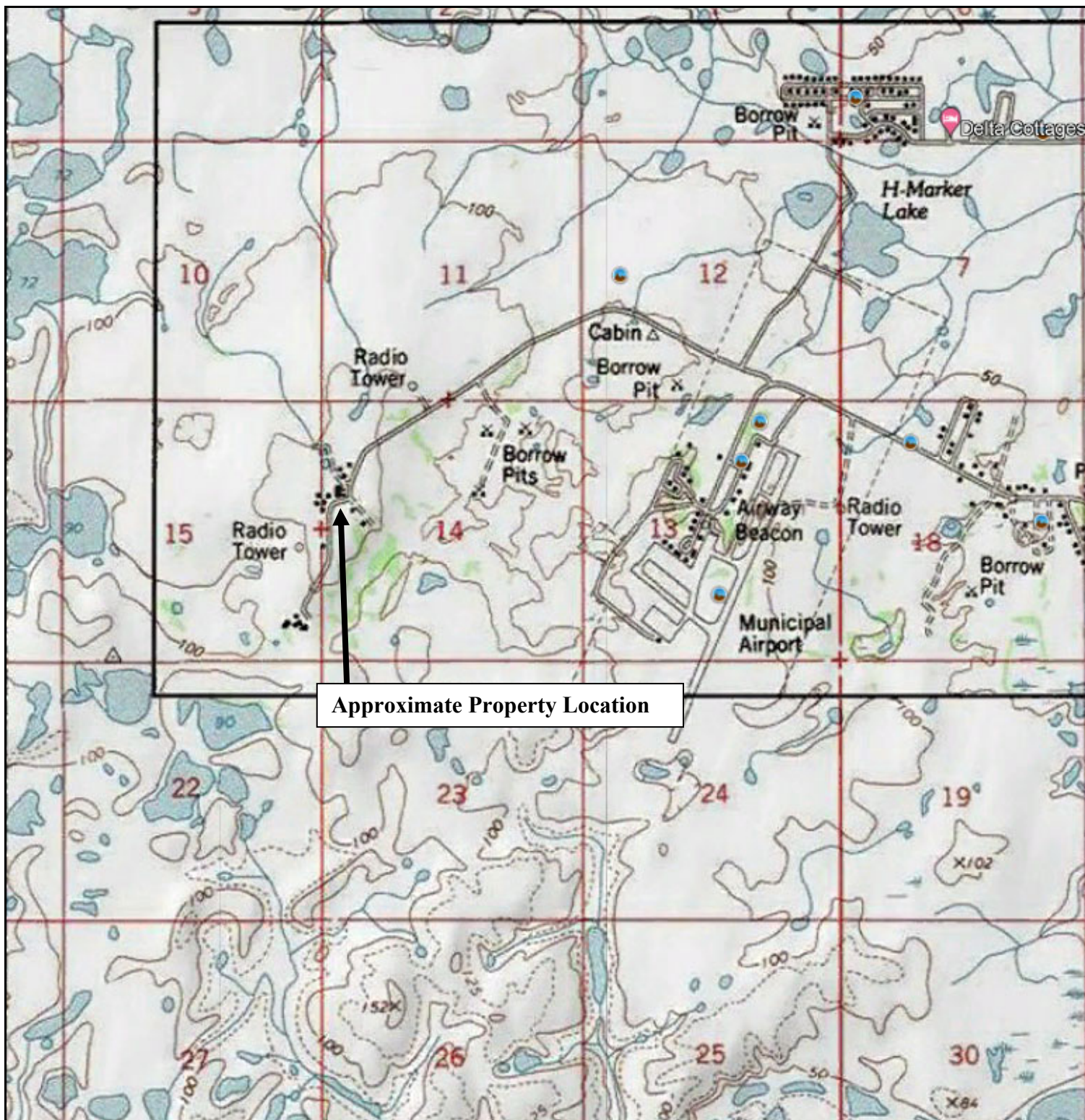
---

\_\_\_\_\_  
Signature, USFWS Representative

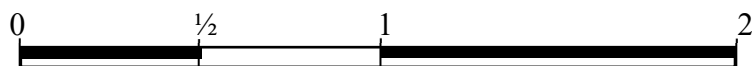
\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature, ADEC Project Manager

\_\_\_\_\_  
Date



Source: Google Earth Pro ©; USGS DRG



Approximate Scale in Miles



BIA Administrative Site  
Bethel, Alaska

**Property Vicinity Map**



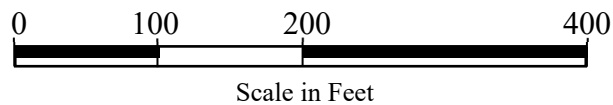
June 2022

Figure 1








Source: ESRI



### Key

-  = Proposed Soil Boring Locations
-  = Parcel Outlines
-  = Partially Characterized Areas of Known or Suspected Contamination

BIA Administrative Site  
Bethel, Alaska  
**Proposed Soil Boring Locations – Southern Parcel**

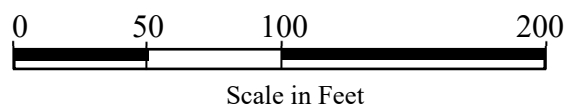


**June 2022**




**Figure 2**



Source: ESRI



### Key

-  = Proposed Soil Boring Locations
-  = Parcel Outlines
-  = Partially Characterized Areas of Known or Suspected Contamination



BIA Administrative Site  
Bethel, Alaska  
**Proposed Soil Boring Locations – Northern Parcel**

  
BGES, INC.

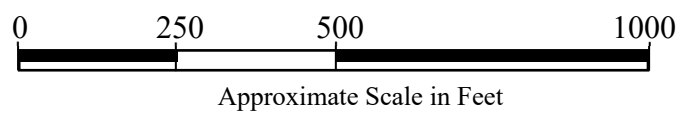
**June 2022**


**Figure 3**





Source: ESRI



BIA Administrative Site Bethel, Alaska		
<b>Approximate Monitoring Well Locations</b>		
 BGES, INC.	June 2022	Figure 4

**ATTACHMENT A**  
**RESUMES FOR KEY BGES PERSONNEL**



ENVIRONMENTAL CONSULTANTS

**BGES, Inc.**  
1042 E. 6<sup>th</sup> Avenue  
Anchorage, Alaska 99501  
PH: (907) 644-2900  
FAX: (907) 644-2901  
Bob@BGESINC.com  
www.BGESINC.com

**ROBERT N. BRAUNSTEIN, C.P.G.; P.G. PRESIDENT**

---

**EDUCATION**

B.S., Geology, State University of New York, Oneonta, 1980  
B.S., Secondary Education, Earth Science, State University of New York, Oneonta, 1980  
MBA, University of Alaska, Anchorage, 2002

**PROFESSIONAL CERTIFICATIONS**

Certified Professional Geologist: American Institute of Professional Geologists (7690)  
Professional Geologist, Alaska (AA 369)  
Professional Geologist, Washington (3305)

**PROFESSIONAL SUMMARY**

Mr. Braunstein has been a resident of Eagle River since 1994 and has more than 35 years in environmental consulting/geology, with extensive experience in all facets of the industry, including both technical issues and managerial expertise. He prides himself on being extremely responsive to his clients. As a project manager, Mr. Braunstein has led or coordinated hundreds of projects ranging from small Phase I Environmental Site Assessments (ESAs) to large remedial investigations/feasibility studies and implementation programs. He has developed an extensive list of satisfied clients illustrating his ability to meet their needs while providing excellent service. Mr. Braunstein particularly excels at community relations activities.

Mr. Braunstein's most recent experience includes conducting Phase I and II ESAs; underground storage tank closures; managing numerous assessment and remediation projects for the Alaska Department of Environmental Conservation (ADEC), the U.S. Army Corps of Engineers (USACOE), and many other local, state, federal, and private entities; conducting and managing vapor intrusion assessments, noise surveys, and conducting and overseeing mold, bacteriological, asbestos, and lead inspections. In this capacity, he has managed contracts exceeding \$1 Million per year. Mr. Braunstein has managed over a dozen landfill groundwater monitoring programs in Alaska and nationwide.

Specific environmental consulting skills acquired by Mr. Braunstein over the course of his career include drilling observation; slug testing and analysis; soil, groundwater, air, and leachate sampling; soil and groundwater remediation; conducting pumping tests and analysis; monitoring well and water supply well design and installation; soil vapor surveys; fracture trace analysis; surveying; permitting; hazardous waste management; asbestos and lead inspection supervision; bacteriological sampling; noise studies; air emission studies; drainage basin studies, geophysical well logging, and core analysis.



## PROFESSIONAL ASSOCIATIONS AND HONORS

National Executive Committee, American Institute of Professional Geologists (AIPG), 1998 and 2002  
Scholarship Screening Committee, Solid Waste Association of North America, 2001  
Alaska Association of Environmental Professionals, 1999 to present  
President, Alaska Section of AIPG, 1997  
Received National Presidential Certificate of Merit, AIPG, 1997

## PUBLICATIONS AND PRESENTATIONS

*Remediation of Hydrocarbon and Nitrate Contamination in a Complex Geological Environment by Means of a Network of Recovery Wells and Interceptor Trenches*, presented at the Petroleum Hydrocarbons Conference, Houston, Texas, October 1990.

*Planning, Implementation and Evaluation of Site Assessment and Remedial Activities for Hydrocarbon Contaminated Soils*, Hydrocarbon Contaminated Soils Conference, Amherst, Massachusetts, September 1992.

*Planning, Implementation and Evaluation of Site Assessment and Remedial Activities for Hydrocarbon Contaminated Soils*, presented at the South Dakota Department of Environment and Natural Resources 5<sup>th</sup> Annual Groundwater Quality Conference, March 1993.

## SITE INVESTIGATION EXPERIENCE

- ***Principal in Charge for site characterization activities at Former Mine in Port Fidalgo, Alaska.*** Project activities included collection of soil, sediment, surface water, and groundwater samples to evaluate the potential presence of contamination in the uplands.
- ***Principal in Charge for site characterization activities and HBMI at Former Herring Saltery and Fish Meal Plant in Thumb Bay, Knight Island, Alaska.*** Project activities included collection of soil samples from locations that exhibited evidence of potential contamination, collection of samples from the on-site building materials for asbestos analysis, and testing building materials for lead-based paint using a x-ray fluorescence (XRF) lead analyzer.
- ***Managed assessment and excavation and thermal remediation of petroleum-contaminated soils, excavation and disposal of trichloroethylene-contaminated soils, and groundwater monitoring program at a construction site for Southcentral Foundation in Anchorage, Alaska.*** Project activities included advancement of more than 100 soil borings, advancement of over 50 test pits, installation of a groundwater monitoring well, observation and coordination of the excavation and disposal of over 5,000 cubic yards of contaminated soils, and over 65,000 cubic yards of uncontaminated soils, collection of nearly 1,000 soil samples, tabulation and quality control validation of laboratory data, and the implementation of alternative soil screening methods including colorimetric tube and reagent type screening sample kits for petroleum and trichloroethylene contaminants.
- ***Managed a tetrachloroethylene (PCE) investigation/remediation project at 4<sup>th</sup> Avenue and Gambell Street in Anchorage.*** Project activities included advancement of soil borings, installation of monitoring wells, collection of soil and groundwater samples, removal of hydraulic lifts and underground storage tanks, excavation and disposal of hydrocarbon-contaminated soils, and disposal of drill cuttings as hazardous waste. Detected PCE concentrations were as much as four orders of magnitude above the ADEC cleanup criterion.
- ***Principal in charge; Drum Characterization; Palmer, Alaska.*** Project activities included using Chlor-n-oil and Chlor-d-Tect test kits to characterize more than 80 drums for disposal. Product samples were collected using drum thieves.
- ***Coordinated groundwater and air monitoring and groundwater remediation program for car dealership in Anchorage, Alaska.*** Project activities included collection of groundwater and indoor/outdoor air samples, manual recovery of free product, and treatment of free and dissolved product in a monitoring well using socks equipped with petroleum remediation powder. In addition to a reduction in hydrocarbon concentrations, the reduction in chlorinated solvent concentrations was experienced during use of the remediation technology.
- ***Principal in Charge for site characterization activities at Former Heinz Salvage Yard in Gakona, Alaska, under BGES' ADEC Term Contract.*** Project activities included excavation of numerous test pits;

installation of temporary monitoring wells; and collection of soil, groundwater, and surface water samples. Discrete soil samples were collected from the test pits and selected surface locations; and a composite sample was collected from an area that exhibited evidence of prior burning, for analysis of dioxins.

- ***Principal in Charge for the excavation of approximately 400, 55-gallon drums from a former dumping ground in Valdez, Alaska.*** Project activities included removing drums, automotive parts, batteries, and miscellaneous items from a wooded area on city property; collecting soil samples; collecting samples of unknown contents from a drum; collecting a sample of transformer oil for polychlorinated biphenyl (PCB) analysis; collecting a sample from a drinking water well; arranging the disposal of the drums and miscellaneous uncovered items; excavation of petroleum and metals-contaminated soils; management and disposal of hazardous waste; and reporting.
- ***Managed soils, freshwater, and sediments assessment and remediation project for the MOA at Point Woronzof, Alaska.*** Project activities included collection of soil samples, conducting a hazardous building materials inspection (including lead-based paint and asbestos testing), excavation and thermal remediation of contaminated soils associated with releases from drums and tanks, sampling of pond water and discharge of the water to gain access for sediment sample collection.
- ***Project manager for a site characterization, metals background study, and contaminated soils excavation project at an industrial lot in Anchorage, Alaska.*** Project activities included the excavation of numerous test pits and the advancement of soil borings for the purpose of collecting soil samples for laboratory analyses, the performance of a background study to determine if elevated arsenic concentrations that were found in peat underlying the site were indicative of naturally-occurring arsenic concentrations.
- ***Principal in Charge for site characterization and remediation activities at a former power plant in Kaktovik, Alaska.*** Project activities included excavation of 26 test pits and collection of subsurface soil samples from the permafrost. Upon receipt of laboratory analytical data, the extents of soil contamination were identified and the contaminated soil was excavated into 1,118 supersacks. BGES attended several meetings and led negotiations with the ADEC, and ultimately obtained approval to dispose of a portion of the contaminated soils in the local sewage lagoon as cover material. BGES coordinated the transportation and disposal of the remainder of the contaminated soil in the Columbia Ridge Landfill in Arlington, Oregon.
- ***Conducted diesel-contaminated soil excavation and remediation at the site of a heating fuel release at a greenhouse in Talkeetna, Alaska.*** Project work was conducted as an emergency response and included excavation of contaminated soils to a depth of approximately 27 feet below grade, construction of a bioremediation cell with a passive air diffusion system, placement of the soils in the cell along with nutrients, sampling of the facility's water supply well, and conducting a follow-up soil boring. Conditional closure was granted by the ADEC subsequent to completion of site activities.
- ***Managed excavation and thermal remediation of contaminated soils and groundwater monitoring program at a large trailer park in Anchorage.*** Project activities included excavation and thermal remediation of more than 2,500 cubic yards of contaminated soils, installation of monitoring wells using pre-packed well screens, conducting a water supply well search, and removal of a 32-foot long underground storage tank.
- ***Managed and conducted multi-year site assessment and remediation activities at a fish processing plant in Egegik, Alaska.*** Project activities included completion of a Phase I Environmental Site Assessment, advancement of hand borings and drilled soil borings, installation of piezometers and monitoring wells, collection of soil and groundwater samples, excavation and land-farming of diesel fuel and bunker C contaminated soils, conductance of a pilot-scale mushroom remediation test, and installation of an interception trench/infiltration trench product recovery system.
- ***Managed numerous underground storage tank (UST) closure assessments at many facilities in Anchorage, Alaska.***
- ***Conducted a soil excavation and remediation program in Kodiak, Alaska.*** Project activities included excavation and stockpiling several hundred cubic yards of contaminated soils from multiple areas where underground storage tanks had released diesel fuel. Collected soil samples for confirmation of remaining contaminant concentrations in soils and sampled the stockpile for future disposal options. Designed and managed a multi-incremental soil sampling program (which saved several thousand dollars) to characterize the stockpiles during a subsequent phase of project work.

- ***Managed a site characterization at an oil-changing facility in Anchorage.*** Project activities included conducting a Phase I ESA, evaluating and sampling an interior vault, evaluating an oil/water separator, replacing floor drain piping, closing injection wells, advancing soil borings, and installing and sampling monitoring wells.
- ***Managed contaminated soils and groundwater assessment and remediation project at a bus barn facility in Anchorage, Alaska.*** Project activities included advancement of soil borings, collection and analysis of soil, groundwater, and soil gas samples, excavation and thermal remediation of petroleum-contaminated soils. Sources of contamination included gasoline, diesel, and used oil from underground storage tanks, release of petroleum contaminants from stored buses, releases of chlorinated contaminants and other potential historical releases from previous property owners.
- ***Served as Project Principal for a Limited Phase II Environmental Site Assessment at the Port of Anchorage (POA) for the MOA.*** Project activities included obtaining security passes to access the port, attending meetings with the POA personnel and the ADEC, preparation of a work plan, advancement of soil borings and installation of monitoring wells, collection of soil and groundwater samples, and miscellaneous consulting services.
- ***Managed a Phase I and II ESA for Anchorage Water and Wastewater Utility at their Eagle River wastewater treatment plant.*** Project activities included multi-incremental soil sampling of a former sludge-drying area, almost 8 acres in size. The multi-incremental sampling approach saved tens of thousands of dollars versus a discrete soil sampling approach.
- ***Managed a drum and soil sampling/remediation program for the Unga Tribal Council and the City of Sand Point.*** Project activities included testing the drums for hazardous characteristics, conducting multi-incremental and discrete soil sampling, excavation of contaminated soils and bioremediation in a biocell.
- ***Coordinated Contaminated Site Assessment for Anchorage Water and Wastewater Utility at their headquarters in Anchorage.*** Project activities included soil boring advancement; monitoring well installation, development, surveying, and sampling; and laboratory analyses. Drilling and sampling activities were performed on weekends and in the evenings after business hours to provide minimal disruptions to our client's business.
- ***Program Manager for a soil remediation program at the Fire Lake Flying Club under BGES' ADEC Term Contract in Eagle River, Alaska.*** Project activities included excavation of contaminated soils; thermal treatment of the soils prior to disposal; and removal, reinstallation and sampling of well points. Significant dewatering was required because of the shallow water table near the lake. The excavation was further complicated by the proximity of the contaminated soils to an active drinking water well and fuel pipeline.
- ***Coordinated a site characterization effort under contract to the ADEC at a home heating oil release in Palmer, Alaska.*** Project activities included advancement of soil borings (using air rotary drilling), installation of a monitoring well, and collection of soil and groundwater samples.
- ***Manager of an environmental assessment including soil, groundwater, and asbestos sampling in support of a proposed land swap between the Alaska Department of Transportation and Public Facilities (ADOT&PF), and the Federal Aviation Administration, King Salmon, Alaska.***

#### HAZARDOUS WASTE AND RELATED EXPERIENCE

- ***Managed a drum sampling, contaminated soils removal, and asbestos and lead-based paint abatement project in Ekuk, Alaska.*** Liquid samples were characterized using a portable hazardous characterization kit, like samples were composited for laboratory analyses, and based on the laboratory results, the liquids were bulked together, thereby reducing disposal costs.
- ***Coordinated a sampling program of transformers for Kipnuk Light Plant in Kipnuk, Alaska.*** Work consisted of sampling 41 transformers for the potential presence of polychlorinated biphenyls (PCBs) in the oil.

#### FEDERAL GOVERNMENT PROJECT EXPERIENCE

- ***Coordinated site assessments as a subcontractor for the U.S. Fish & Wildlife Service at a residential building in Kodiak and remote location on Sheep Island in Uganik Bay near Kodiak, Alaska.***

- ***Managed revision of a Uniform Federal Policy Quality Assurance Project Plan and data entry into the ERPIMS database as a subcontractor for the Air Force at the former Tatalina Air Force Base in Tatalina, Alaska.***
- ***Project Manager of a Restoration Advisory Board (RAB) Technical Assistance for Public Participation (TAPP) for a RAB in Yakutat, Alaska.*** Project activities included reviewing various documents prepared by consultants contracted directly to the U.S. Army Corps of Engineers (USACOE) and providing comments to assist the RAB with their interpretation, and attending a RAB meeting. The RAB members were very complimentary of our work and insisted that our contract be renewed.
- ***Project Manager of a Preliminary Investigation at the Nichin Metals Bury Site for the United States Department of Agriculture, Forestry Service.*** Project activities included advancement of test pits and collection of soil, sediment, and surface water samples.
- ***Project Coordinator for a limited remedial investigation/site investigation as part of the Base Realignment and Closure Effort at Fort Greely, Alaska, for the USACOE.*** Twenty sites were investigated for potential contamination by excavating test pits, drilling soil borings, and collecting surface soil samples. Various remedial technologies were planned for follow-up work including soil excavation and thermal treatment, hazardous waste disposal, and bioventing.
- ***Project Coordinator for a remedial investigation/interim removal action in Cold Bay, Alaska, for the USACOE.*** Project activities included investigation of a contaminant seep in a beach area, removal of more than one dozen USTs, and assessment of a drum disposal area with subsequent removal of more than 2,200 drums.
- ***Remedial Investigation Team Leader for assessment and remediation of a remote site for the USACOE at Akutan Naval Station, Akutan, Alaska.*** Responsibilities included preparation of planning documents and final report, and implementation of field assessment activities. A risk assessment was performed to guide remedial activities. A passive bioremediation system was installed to facilitate soil cleanup. The project was awarded Vice President Gore's Hammer Award and the Secretary of Defense Award of Excellence.
- ***Coordinated lead and PCB testing of building materials as a subcontractor to the Air Force at Clear Air Force Station, near Anderson, Alaska.***
- ***Manager of a Remedial Investigation/Feasibility Study at an UST release site in Kodiak, Alaska, for the U.S. Coast Guard (USCG).*** Work included preparation of a value engineering report, drilling several test borings and monitoring wells, sediment and surface water sampling in an adjacent stream, installation of one vapor extraction well and four monitoring points, and conducting bioventing feasibility testing.

## ADDITIONAL TRAINING

- Health and Safety Training for Hazardous Waste Operations (29 CFR 1910.120) (1990)
- Supervisor Training for Hazardous Waste Operations (29 CFR, 1910.120)
- Health and Safety Training for Hazardous Waste Operations (29 CFR 1910.120) (annual 8-hour refreshers)
- Using Well Hydraulics to Solve Groundwater Problems, University of Wisconsin, Madison, January 9-12, 1989
- Innovative Remediation Techniques Symposium, Environmental Professionals of Iowa, November 19, 1993
- Project Management Seminar, American Consulting Engineers Council, Atlanta, Georgia, February 15-17, 1996
- Basic Field Radiation Safety training, Lockheed Analytical Services, Anchorage, Alaska, March 6, 1996
- Immunoassay Field Screening, Ensys, Inc., Anchorage, Alaska, April 16, 1996
- Multicultural Diversity Seminars, USACOE, Elmendorf Air Force Base, Alaska, October 22, 1996, and December 3, 1996
- Contractor Quality Control Training, USACOE, Anchorage, Alaska 1996
- Field-Based Site Characterization Methodologies, USACOE, Albuquerque, New Mexico, March 16, 1998
- Natural Attenuation and Remediation for Contaminated Sites, Sponsored by the ADEC, Anchorage, Alaska, March 29-31, 2000
- XRF instrument training from Niton Corporation, Anchorage, Alaska, May 6, 2005
- Soil Vapor Intrusion Sampling and Evaluation, ADEC, Anchorage, AK, January 20, 2010



ENVIRONMENTAL CONSULTANTS

*BGES, Inc.*  
1042 E. 6th Avenue  
Anchorage, Alaska 99501  
Ph: (907) 644-2900  
Fax: (907) 644-2901  
www.BGESINC.com  
carson@bgесinc.com

## **CARSON KENT, ENVIRONMENTAL SCIENTIST II**

### **EDUCATION**

B.S. Environmental Science; Alaska Pacific University, 2018

### **PROFESSIONAL SUMMARY**

Mr. Kent joined BGES in July of 2019 as an Environmental Scientist I and is a resident of Anchorage. Since his employment with BGES, Mr. Kent has conducted and assisted with a variety of environmental consulting services; including Phase I and Phase II Environmental Site Assessments (ESAs), National Environmental Policy Act (NEPA) Environmental Assessments (EAs), soil screening and sampling, oversight of contaminated soil excavation, oversight and monitoring of passive and active soil vapor extraction (SVE) systems, groundwater sampling, collection of indoor air samples, vapor barrier testing, radon testing, and hazardous building material inspections (HBMI). Mr. Kent is a Qualified Environmental Professional (QEP) as defined by the Alaska Department of Environmental Conservation (ADEC).

Mr. Kent has experience using both Python and the R statistical package to perform trend analysis in both parametric and non-parametric data. Additionally, he has experience using drones in conjunction with ArcGIS, QGIS and Agisoft software to produce a variety of GIS and imagery products such as orthomosaic images and digital elevation models.

### **SITE CHARACTERIZATION AND REMEDIATION EXPERIENCE**

- ***Performed Phase II Site Characterization Activities at Abandoned Mine Site in Port Fidalgo, Alaska.*** Project activities included research on the locations of previous mineral exploration activities and equipment used at these sites, and the collection of georeferenced field screening samples, shallow soil samples, sediment samples, surface water samples, and groundwater samples in order to determine the presence, type, and extent of contamination in the uplands of the site.
- ***Performed Phase II Site Characterization Activities in Gakona, Alaska.*** Project activities included drum characterization sampling, supervision of the excavation of test pits and installation of temporary monitoring wells, collection of field screening samples, and collection of laboratory analytical samples.
- ***Performed Phase II Site Characterization Activities in Soldotna and Butte, Alaska.*** Project activities included the collection of soil boring samples, field screening samples, shallow soil samples, sediment samples, surface water samples, and groundwater samples in order to determine the presence, type, and extent of contamination at the subject properties.
- ***Observed a remedial excavation at a multi-family residential development in Eagle River, Alaska.*** Project activities included observation of contaminated soil excavations, and collection of field-screening and laboratory analytical stockpile and confirmation samples.

- ***Performed confirmation sampling of soil stockpiles in Anchorage, Alaska.*** Project activities included collection of field-screening and laboratory analytical samples.
- ***Performed groundwater sampling activities in Anchorage, Alaska.*** Project activities included measuring groundwater quality parameters and collection of groundwater samples from semi-permanent monitoring wells for laboratory analyses.
- ***Performed regulated tank removal activities in Fort Yukon, Alaska.*** Project activities included the collection of confirmation and screening samples and documentation of tank, excavation, and soil stockpile in accordance with the ADEC UST tank regulations and guidance documents.
- ***Conducted indoor air sampling and soil vapor extraction (SVE) system evaluation, maintenance, and oversight in Anchorage, Alaska.*** Project activities included collection of indoor air samples, collection of exhaust samples from the SVE system, and the testing and optimization of the SVE system for the mitigation of intrusion of air contamination from a TCE contaminant plume.
- ***Radon sampling at multi-unit residential properties in Anchorage, Alaska.*** Project activities included the deployment and collection of passive air samplers and shipment of the samplers to a laboratory for analysis.
- ***Performed characterization of waste oil drums in Palmer, Alaska.*** Project activities included field screening and composite sampling of drums, oversight of their removal, and sampling of soils in the project vicinity.
- ***Performed tissue and sediment sampling in Sitka, Alaska.*** Project activities included replicating sample locations from a previous sampling event, characterizing soils and sediments using a Munsell Color Chart, sampling sediments at multiple depths, and sampling bivalve tissues from target species.

## **PHASE I ESA AND HBMI EXPERIENCE**

- ***Conducted Phase I ESAs of undeveloped properties in Kwigillingok, Kenai, Ninilchik, Anchor Point, and Big Lake, Alaska and Othello, Washington.*** Project activities included extensive review of state, local, and federal property databases; review of historical aerial photographs; conducting comprehensive site reconnaissance of the property grounds; conducting interviews with property owners and persons knowledgeable about the properties being assessed; and reporting findings.
- ***Conducted Phase I ESAs for residential and commercial properties in Anchorage, Palmer, Wasilla, Fairbanks, Soldotna, and Kenai, Alaska.*** Project activities included extensive review of state, local, and federal property databases; review of historical aerial photographs; conducting comprehensive site reconnaissance of the property grounds including aerial surveys via drone; conducting interviews with property owners and persons knowledgeable about the properties being assessed; and reporting findings.
- ***Conducted a Phase I ESA at a seafood processing facility in Big Creek, Alaska.*** Project activities included extensive review of state, local, and federal property databases; review of historical aerial photographs; conducting comprehensive site reconnaissance of the property grounds including aerial surveys via drone; conducting interviews with property owners and persons knowledgeable about the properties being assessed; and reporting findings.
- ***Conducted a Phase I ESA, HBMI, and Phase II ESA at a large seafood processing facility in Kodiak, Alaska.*** The Phase II ESA activities included drilling soil borings near an underground storage tank and a transformer, and installing and sampling a temporary monitoring well. The HBMI activities include collection of samples for asbestos analyses and using an x-ray fluorescence (XRF) meter to evaluate potential lead-based paint (LBP). More than 600 LBP readings were recorded.

- ***Assisted with seven Phase I ESAs of office buildings in Anchorage, Alaska for Wells Fargo Bank.***
- ***Conducted HBMI at numerous commercial properties in Anchorage, Alaska.*** Project activities included utilizing a Heuresis Pb 200i XRF Analyzer to test for the presence of lead in painted surfaces, and collecting building materials for laboratory analyses. The features of the houses that were analyzed included the windows, doors, floors, ceilings, and surrounding fixtures and materials.
- ***Conducted asbestos sampling at numerous residential and commercial sites in Anchorage, Alaska.*** Project activities included the collection of samples for laboratory analysis of asbestos contents.
- ***Conducted an HBMI at a multi-unit residential property in Kenai, Alaska.*** Project activities included utilizing a Heuresis Pb 200i XRF Analyzer to test for the presence of lead in painted surfaces, and collecting building materials for laboratory analyses. The features of the houses that were analyzed included the windows, doors, floors, ceilings, and surrounding fixtures and materials.

## **NEPA EA EXPERIENCE**

- ***Conducted site reconnaissance for a partial NEPA EA in Fairbanks, Alaska.*** Project activities included conducting a visual inspection of the property for evidence of potential contamination such as stained soils or stressed vegetation, and for the presence of hazardous materials.
- ***Assisted with a NEPA EA in accordance with the Bureau of Justice Assistance for a Tribe in Kenai, Alaska.*** Project activities include conducting site reconnaissance of the project site, interviewing property owners and owners of neighboring properties, and researching potential effects of the proposed project on various resources.
- ***Assisted with a partial NEPA EA at a commercial site in Anchorage, Alaska.*** Project activities included conducting a visual inspection of the property for evidence of potential contamination such as stained soils or stressed vegetation, and for the presence of hazardous materials.

## **OTHER PROFESSIONAL EXPERIENCE**

- ***Remote habitat survey in Ninilchik, Alaska.*** Project activities included surveying potential habitat via drone, constructing an orthomosaic map and digital elevation model of the area, and incorporating survey data into a model to extrapolate total feasible habitat area.
- ***Conducted Data tabulation, data quality review, and reporting for numerous sites in Alaska.***
- ***Performed a mineral remoteness study for a site in Juneau, Alaska.*** Project activities included research of geology and mineral explorations and assessment of potential impacts at the subject property.
- ***Biological sampling of halibut in Homer Alaska.*** Project field activities included the collection of blood, muscle, and mucosal samples from halibut for the purpose of screening for ichthyophonus, performing stable isotope analysis, and determining cortisol levels. Laboratory activities included sample preparation and data tabulation and analysis.

## **ADDITIONAL TRAINING**

- 40- Hour Hazardous Waste Operations Emergency Response Training and Certification (2019) and 8-Hour Refresher Course (2020)
- Asbestos Hazard Emergency Response Act (AHERA)-Certified Building Inspector (2020)
- Lead Based Paint Inspector (2020)
- Lead Based Paint Risk Assessor (2020)
- Cardiopulmonary Resuscitation (CPR)/First Aid (2019)
- Federal Aviation Administration (FAA) Remote Pilot License (2019)
- Coursework on Fisheries Management Alaska Pacific University (2017)

**ATTACHMENT B**  
**ADEC COMMENT MATRIX**



**REVIEW COMMENTS**      **PROJECT: Bethel BIA Headquarters**      **DOCUMENT: Draft Ltd. Phase II ESA Work Plan**

ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION		DATE: 6/8/2022 REVIEWERS: Timothy Sharp (Contaminated Sites Program), Neil Lehner (Solid Waste Program)	Action taken on comment by: Rose Pollock (BGES)		
No.	Location in Document	COMMENTS	RESPONSE	RESPONSE	RESPONSE
1.	General Comment	Please include a References section and cite Alaska Regulations 18 AAC 75.325 to 18 AAC 75.390, 18 AAC 60, and the <i>ADEC Field Sampling Guidance</i> (January 2022), along with any other historical site documents referenced in the work plan.	A References section has been added.	A	A
2.	General Comment	ADEC recommends planning to incorporate a review of the fencing and any signage at the site. Nearby sites have seen vandalism of the fences to gain entry to contaminated areas.	Per USFWS representative Ray Born, the known contamination is in the vicinity of Building 413 and is fully fenced, and the fence is in good condition.	A	A
3.	General Comment	Please include a table of contaminants of concern and the appropriate cleanup levels as described in 18 AAC 75.	A table of contaminants of concern and applicable cleanup criteria has been added.	A	A
4.	Introductory Statement, PDF Pg. 2	Statement: "It is our understanding that asbestos has been identified beneath the slab of Building 413, and that asbestos will be accessible through gaps in the slab..." Please clarify what type of materials are suspected of being asbestos containing materials. Additionally, does this imply that the slab for this building was located over a historic landfill? Please provide clarification.	Per USFWS representative Ray Born, the material beneath the slab of Building 413 is Concrete Asbestos Board (CAB), and no other materials at the site are known or suspected to contain asbestos. No records of a landfill have been identified.	A	A
5.	Scope of Work, Pg. 2	Statement: "The field sampling activities will be performed by a Qualified Environmental Professional (QEP)..." Please provide resumes for any QEPs that will be directing work on site.	Resumes have been added in Attachment A.	A	A
6.	Task 2	Sampling, transporting, and disposing of asbestos containing materials should be	Our scope of work does not include transportation or disposal of	A	A

		discussed with the Solid Waste Program to ensure compliance with Solid Waste regulations, described in 18 AAC 60.	asbestos. I have consulted with Lori Aldrich of the Solid Waste Program and she has no concerns with our scope of work as long as the sampling is performed by an appropriately-trained person (Mr. Kent is an AHERA-Certified Building Inspector). However, she did note that future transportation and disposal should not be performed until disposal options have been thoroughly evaluated.		
7.	Task 2	Please clarify where at the site asbestos will be sampled, including the former buildings that will be sampled.	Per USFWS representative Ray Born, all buildings and building sites have already been sampled.	A	A
8.	Task 2	Please describe the Chain of Custody protocol.	This section has been modified to provide more detail regarding the chain of custody protocol.	Accepted, with comment. Thank you for including more information. According to the EPA's National Emission Standards for Hazardous Air Pollutants, regulated (or friable) asbestos containing materials (RACM) will need to be transported in a leak proof container. Please confirm transportation of asbestos samples will follow EPA requirements.	A
9.	Task 3	If analytical results show soil cuttings are contaminated, ADEC requests the 55-gallon drum be disposed of at an appropriate treatment facility. A Transport, Treatment or Disposal Approval Form will be required to be filled out and sent to ADEC for signature.	A statement to this effect has been added.	A	A
10	Task 4	Statement: "This water will then be treated with granular activated carbon (GAC) by filtering the water as it is poured from one bucket into another." Please clarify where the GAC filter will be disposed.	A statement has been added, detailing that the spent GAC will be transported to US Ecology in Anchorage for disposal.	Accepted, with comment. A completed Transport, Treatment or Disposal Approval Form will be required before transport of this material as well.	A
11	Task 4	Statement: "Any solid wastes produced during sampling will be disposed of at the Bethel Landfill." Please ensure that	The statement has been modified to clarify that the used, non-hazardous sampling supplies will be	A	A

		you coordinate with appropriate landfill staff to ensure that all wastes are acceptable for disposal. If this statement is simply referring to IDW, please clarify it as such.	transported to the local landfill for disposal.		
12	Figures 2 and 3	Please add a layer to this figure depicting the estimated extent of contamination, current or former source areas, and any previous excavations to better show how soil borings and groundwater samples will help characterize the site.	Layers added.	Accepted, thank you!	A, thank you too!
		- End of comments -			